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MAY 1970

FEED
Situation

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
JUN 17 1970
CURRENT SERIAL RECORDS

ECONOMIC RESEARCH SERVICE • U.S. DEPARTMENT OF AGRICULTURE

Table 1.--Statistical summary of prices, indexes and price ratios, recent years and months

Item	Unit	Season average		1969	1970			
		1967/68	1969/69	April	Jan.	Feb.	March	April
FEED GRAIN AND HAY PRICES								
Corn, No. 3 Yellow, Chicago	Dol. per bu.	1.12	1.17	1.20	1.22	1.23	1.22	1.26
Price received by farmers	do.	1.03	1.08	1.12	1.12	1.14	1.13	1.15
Oats, No. 1 White, Chicago	do.	.766	.636	.665	----	---	.595	---
No. 2 White, Minneapolis	do.	.702	.641	.667	.656	.648	.635	.665
Price received by farmers	do.	.659	.598	.614	.587	.591	.581	.588
Barley, No. 3, Minneapolis	do.	1.24	1.15	1.17	1.06	1.06	1.07	1.09
Price received by farmers	do.	1.00	.911	.922	.877	.860	.831	.829
Grain sorghum, No. 2 Yellow, Kansas City	Dol. per cwt.	1.99	2.00	1.98	2.06	2.04	2.01	2.04
Price received by farmers	do.	1.77	1.70	1.76	1.92	1.92	1.87	1.80
All hay, baled, price received by farmers	Dol. per ton	24.50	23.60	24.50	25.00	25.20	24.90	24.00
Alfalfa hay, baled, price received by farmers	do.	23.60	23.00	25.30	25.50	25.70	25.40	24.50
PROCESSED FEED PRICES, BULK								
Soybean meal, 44%, solvent, Decatur	Dol. per ton	76.90	74.10	73.30	87.50	85.25	71.80	74.60
49-50%, solvent, Decatur	do.	84.30	82.50	81.30	97.60	95.60	79.60	83.10
Cottonseed meal, 41%, expeller, Memphis	do.	77.60	65.20	61.70	88.10	74.50	64.40	64.90
Linseed meal, 34%, solvent, Minneapolis	do.	76.50	68.40	65.30	74.75	76.40	73.50	67.50
Peanut meal, 50%, S.E. mills	do.	81.10	80.00	75.30	83.25	81.75	76.60	75.50
Tankage digester, 60%, Chicago	do.	92.50	94.90	87.50	121.25	134.40	113.00	116.90
Meat meal, 50%, Chicago	do.	88.80	91.60	84.80	121.90	134.40	107.10	115.60
Fish meal, 60%, New York (bagged)	do.	127.00	150.60	145.00	197.50	185.50	196.00	202.50
Gluten feed, 21%, Chicago	do.	44.90	43.70	42.00	56.75	56.00	44.40	42.00
Brewers' dried grains, 24%, Milwaukee	do.	45.90	45.00	39.70	59.25	59.75	41.90	40.60
Distillers' dried grains, 28%, Cincinnati	do.	52.70	55.30	47.20	59.00	61.75	58.80	52.00
Wheat bran, Minneapolis	do.	39.30	38.70	41.40	53.10	40.75	36.80	40.75
Buffalo	do.	42.20	41.60	44.20	52.90	45.40	39.50	46.40
Wheat middlings, Minneapolis	do.	39.80	39.90	41.90	53.60	41.25	36.80	40.75
Buffalo	do.	44.30	44.40	46.00	56.40	46.10	40.70	48.10
Hominy feed, Chicago	do.	39.00	41.10	41.00	42.40	40.90	35.10	40.10
Molasses blackstrap, New York	do.	27.93	23.10	23.10	28.20	28.20	28.20	28.20
Beet pulp (molasses), Los Angeles	do.	46.50	45.50	44.40	55.00	55.00	54.20	50.50
Alfalfa meal, 17%, dehydrated, Kansas City	do.	39.10	42.40	45.60	49.10	48.80	46.40	45.40
Tallow, inedible price, Chicago	Cents per lb.	.046	.058	.060	.069	.066	.074	.081
Urea, 42% N., Ft. Worth (bagged)*	Dol. per ton	N.A.	N.A.	72.00	71.00	71.00	71.00	71.00
PRICES PAID BY FARMERS								
Soybean meal, 44%	Dol. per cwt.	5.30	5.31	5.21	5.73	5.87	5.62	5.46
Cottonseed meal, 41%	do.	5.28	5.03	5.00	5.31	5.53	5.40	5.26
Wheat bran	do.	3.49	3.48	3.62	3.73	3.82	3.72	3.65
Wheat middlings	do.	3.59	3.58	3.69	3.81	3.91	3.72	3.74
Broiler grower feed	Dol. per ton	89.00	90.00	90.00	93.00	94.00	94.00	93.00
Laying feed	do.	81.00	80.00	79.00	82.00	83.00	83.00	83.00
Dairy feed, 16%	do.	72.00	71.00	71.00	74.00	75.00	73.00	73.00
Beef cattle feed, 30% and over	Dol. per cwt.	4.77	4.65	4.65	4.89	4.96	4.80	4.73
Hog feed, over 29%	do.	6.27	6.36	6.29	6.75	6.99	6.76	6.57
Alfalfa hay, baled	Dol. per ton	33.20	33.60	35.90	35.80	35.80	35.60	35.20
PRICE INDEXES (1957-59=100)								
Feed grains, prices received by farmers	Pct.	98	101	102	102	102	101	102
Eleven high-protein feeds, at principal markets	do.	130	126	122	153	150	131	133
Five oilseed meals	do.	138	132	129	158	153	132	135
Tankage, meat meal, and fish meal	do.	103	111	105	142	148	136	139
Gluten feed, brewers' dried grains, and distillers' dried grains	do.	114	115	110	134	135	120	117
Feed, prices paid by farmers	do.	102	102	103	106	108	106	105
LIVESTOCK AND POULTRY/FEED PRICE RATIOS 1/	Average (April)							
Hog/corn, Chicago 2/	1959-68=14.1	17.5	18.5	17.3	22.4	23.2	21.7	19.6
Hog/corn, U.S.	1959-68=14.9	17.9	18.9	17.5	23.5	24.0	22.7	20.7
Beef steer/corn, Chicago 3/	1959-68=21.2	24.5	25.4	25.8	23.9	24.6	26.2	25.0
Milk/feed, U.S.	1959-68= 1.38	1.66	1.74	1.67	1.80	1.76	1.73	1.71
Egg/feed, U.S.	1965-69= 8.1	7.8	9.5	9.3	13.0	11.4	10.2	8.5
Broiler feed, U.S.	1965-69= 3.3	3.1	3.3	3.3	3.2	3.0	3.1	2.9
Turkey/feed, U.S.	1965-69= 4.8	4.4	4.7	4.6	5.3	5.3	5.6	5.4

1/ Units of corn or other concentrates ration equal in value to 100 pounds of hog or beef steer, one pound of chicken, milk, or one dozen eggs. 2/ Based on packer and shipper purchases of hogs and No. 3 Yellow corn. 3/ Based on price of beef steers all grades sold out of first hands for slaughter, and No. 3 Yellow corn. *Price series at Houston discontinued.

Prices compiled from Chicago Board of Trade, *Minneapolis Daily Market Record*, *Kansas City Grain Market Review*, *National Provisioner*, *Feedstuffs*, and reports of the Consumer and Marketing Service.

THE FEED SITUATION

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SPECIAL ARTICLE

GRAIN SORGHUM TRENDS IN THE 1960's 28-32

* *

Approved by

The Outlook and Situation Board

May 21, 1970

The summary and a feed grain supply-
use table was released on the
above date

- - - -

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SUMMARY

Feed grain usage in 1969/70 is now expected to exceed last fall's crop of 174 million tons and total about 5% above usage the previous season, resulting in a slightly smaller carryover into 1970/71.

Domestic use, up 3% in October-March, probably will make an even stronger showing the rest of the season as compared with last year, and account for nearly all the expected rise in total usage. Price relationships favor liberal feeding and hog feeding appears on the upswing.

Exports in October-March ran sharply ahead of the year-earlier pace which had been slowed by U.S. dock strikes. Southern Hemisphere competition for feed grain customers is becoming more pronounced, however, pointing to a drop in U.S. volume the rest of the current season. The 1969/70 total may approximate the 18.4 million tons exported last season.

Heavy feed grain utilization in the first half of the year brought April 1 stocks down to near the 116 million tons of a year earlier. Both Government and "free" stocks were close to last year's level. As in 1969, "free" stocks will fall short of requirements for the remainder of the marketing year, indicating a substantial withdrawal from Government stocks during April-September. This will come principally through farmers' repayment of corn loans. Repayments may be about as large as in April-September 1969 when farmers repaid loans on over 300 million bushels of corn.

Corn disappearance so far this year has totaled about 8% above the high level in the first half of 1968/69. For the entire marketing year, use will likely rise more than 200 million bushels to a record high of close to 4.7 billion bushels. This would reduce the carryover next October 1 by about 100 million bushels under the carryover at the beginning of the marketing year.

Heavy utilization of grain sorghums is also expected to bring a moderate reduction in the carryover. Consumption of oats and barley, however, will fall below the 1969 crops, resulting in a substantial increase in the carryover of oats and a moderate increase in barley.

Prices of feed grains averaged about 4% higher in the first half of 1969/70 than in that period last year, but there has been less seasonal rise. The April index of prices received by farmers was practically the same as a year ago. Corn prices, which have advanced less than seasonally this year, averaged $1.15 per bushel in April, 3¢ higher than a year earlier and 10¢ above the 1969 loan rate. Corn prices will continue to be supported by a strong demand this summer. Further seasonal gains, however, will be limited by the large quantity of corn under loan and reseal which may be redeemed by repayment of $1.08 to $1.15 per bushel (including loan and interest charges).

High-protein feed consumption by livestock in 1969/70 is expected to total around 19.6 million tons, 5% larger than last year. During October-March, consumption totaled 10.1 million tons, up 4%. A 13% increase in soybean meal feeding accounted for much of the total increase in these feeds. Supplies of cottonseed meal, on the other hand, were down 8% and fish meal supplies have fallen more than 50%. Prices of high-protein feeds averaged about 10% higher during October-April this year than last, with greatest increases in fish meal and the animal proteins. The strong demand, along with short supplies of some of the protein feeds, probably will keep prices generally above those of a year earlier during the remainder of the marketing year. Also, prices may be affected by uncertainties in production due to upcoming labor-processor wage negotiations.

FEED GRAIN SUPPLIES AND UTILIZATION

April 1 Stocks Indicate Smaller Carryover

Heavy domestic use and exports of feed grains in the first half of the current feeding year brought April 1 stocks down to 116.5 million tons, only slightly larger than the year earlier. Total disappearance is expected to continue heavy during April-September, and the carryover into 1970/71 probably will be slightly below the 50 million tons at the beginning of the current year.

Government stocks (under loan and owned by CCC) totaled 44.7 million tons on April 1, slightly larger than a year earlier (table 5). "Free" stocks totaled close to 72 million tons, practically the same as a year ago. As was the case last year, "free" stocks appear to be a little below total requirements (including an allowance for "free" carryover) for the balance of the marketing year. This will make it necessary to draw on Government stocks, especially corn under loan, to meet April-September requirements.

Domestic use is expected to continue heavy during the remainder of the marketing year, but April-September exports may be around a third below the 10.5 million tons exported in that period of 1969. Smaller exports could offset much of the prospective gain in domestic use.

Domestic Use At Record Rate

Domestic use of feed grains has been at a record rate so far this season, totaling 89 million tons during October-March, 3% above last year's high level and 18% above the 1963-67 average. Consumption is expected to continue heavy during April-September, and probably will make an even larger percentage gain over a year earlier than in the first half of the year. More hogs to be fed and generally favorable livestock/feed price ratios are expected to maintain feed consumption well above that for April-September 1969, when domestic use dropped rather sharply from the heavy feeding the first half of the year.

Domestic use for the entire year is expected to be around 5% or 6% above the

Table 2.--Feed grains: Supply and utilization, United States, average 1963-67, annual 1963-69

Item	Marketing year beginning 1/							
	Average 1963-67	1963	1964	1965	1966	1967	1968 2/	1969 3/
	Million tons							
Supply								
Carryover	53.5	64.4	69.3	54.8	42.1	37.1	48.3	50.0
Production	155.8	153.8	134.2	157.4	157.6	176.0	168.9	174.2
Imports 4/	.3	.4	.4	.3	.3	.3	.3	.3
Total	209.6	218.6	203.9	212.5	200.0	213.4	217.5	224.5
Utilization								
Livestock feed	121.3	116.1	112.8	126.2	125.6	126.1	133.1	141.0
Food, industry and seed	15.0	14.4	14.7	15.1	15.3	15.7	16.0	16.3
Exports 4/	23.0	18.8	21.6	29.1	22.0	23.3	18.4	18.2
Total	159.3	149.3	149.1	170.4	162.9	165.1	167.5	175.5
Carryover at end of year	50.3	69.3	54.8	42.1	37.1	48.3	50.0	49.0

1/ Corn and sorghum grain October-September; oats and barley July-June. 2/ Preliminary. 3/ Preliminary; utilization and carryover at end of year based on indications in May 1970. 4/ Includes grain equivalent of products.

149 million tons in 1968/69. With exports close to last year's level, this would leave a carryover into 1970/71 slightly below the 50 million tons at the beginning of the current season.

Exports in 1969/70 Expected to Be Near Last Year's 18 Million Tons

Exports are expected to total close to 18 million tons shipped in 1968/69. The movement during the year, however, will follow a much different pattern than last year. During October-March, 11.0 million tons of feed grains were exported, 41% above the small export in the first half of 1968/69 when dock strikes sharply curtailed movement in December-February.

With increasing competition from Southern Hemisphere countries, exports have dropped off rather sharply in recent weeks. Increased competition during April-September is expected to reduce exports by around 3 million tons below 10.5 million tons in that period of 1969. Most of this reduction will be in corn and grain sorghums. Barley exports this spring and summer will be much larger than a year earlier as a result of CCC's export sale of around 38 million bushels for shipment during April-September. Oat exports continue at only about a million bushels a quarter.

Farmers to Sell More Than Half Their Feed Grain Crop

Farm sales of 1969 crop feed grains are expected to total 99 million tons or 57% of the crop (table 3). This would be 4 million tons more than sales made from the 1968 crops. Cash returns from the sales of the 1969 feed grains are placed at $3.9 billion, 8% more than last year and the highest ever. Including acreage diversion and price support payments totaling $1,644 million--$276 million more than in 1968--over $5.5 million will be

Table 3.--Feed grains and hay: Production, farm disposition and value of sales, 1963-69

Crop year	Production	Used on farms where grown 1/	Sold 2/		Season average price 2/	Value of production	Value of sales 2/
			Quantity	Percent of production			
	Mil. bu.	Mil. bu.	Mil. bu.	Pct.	Dol. per bu.	Mil. dol.	Mil. dol.
				CORN, grain only			
1963	4,019	2,144	1,875	47	1.11	4,454	2,078
1964	3,484	1,781	1,703	49	1.17	4,064	1,988
1965	4,084	2,077	2,007	49	1.16	4,732	2,327
1966	4,117	2,038	2,079	50	1.24	5,106	2,579
1967	4,760	2,223	2,537	53	1.03	4,940	2,626
1968	4,393	2,066	2,327	53	1.08	4,763	2,523
1969 3/	4,578	2,088	2,490	54	1.12	5,105	2,780
				GRAIN SORGHUM			
1963	585	136	450	77	.977	568	439
1964	490	106	384	78	1.05	512	403
1965	673	148	524	78	1.00	668	524
1966	715	133	582	81	1.02	730	593
1967	756	152	604	80	.992	745	599
1968	740	141	598	81	.950	699	568
1969 3/	743	159	584	79	1.06	782	620
				OATS			
1963	966	657	309	32	.622	608	192
1964	852	570	282	33	.631	541	178
1965	927	613	314	34	.622	585	195
1966	801	526	275	34	.665	538	183
1967	789	523	266	34	.659	525	175
1968	939	586	353	38	.598	569	211
1969 3/	950	578	372	39	.581	559	216
				BARLEY			
1963	393	111	282	72	.897	350	253
1964	386	91	295	76	.947	362	279
1965	392	93	300	77	1.02	395	304
1966	393	104	290	74	1.05	408	304
1967	373	104	269	72	1.00	369	268
1968	423	109	314	74	.911	382	286
1969 3/	417	113	304	73	.877	365	267
				4 FEED GRAINS			
	Mil. tons	Mil. tons	Mil. tons	Pct.	Dol. per ton	Mil. dol.	Mil. dol.
1963	153.8	77.0	76.8	50	---	5,980	2,962
1964	134.2	64.1	70.0	52	---	5,479	2,848
1965	157.4	74.3	83.1	53	---	6,380	3,350
1966	157.6	71.7	85.9	55	---	6,782	3,659
1967	176.0	77.4	98.7	56	---	6,579	3,668
1968	168.9	73.8	95.1	56	---	6,413	3,588
1969 3/	174.2	74.9	99.3	57	---	6,811	3,883
				HAY			
1963	117.5	97.0	20.6	18	24.60	2,716	507
1964	118.8	96.7	22.0	19	23.90	2,809	527
1965	125.5	102.4	23.1	18	23.20	2,913	534
1966	121.0	98.8	22.2	18	25.00	2,892	557
1967	126.3	103.2	23.1	18	24.50	2,897	568
1968	125.5	102.0	23.5	19	23.60	2,855	555
1969 3/	127.1	103.5	23.6	19	24.90	2,985	587

1/ Used for feed and seed on farms where grown. 2/ Includes an allowance for unredeemed loan and purchase agreement deliveries of feed grains valued at the average loan rate, by States. 3/ Preliminary.

realized from feed grains, about $570 million more than in 1968/69.

The quantity of corn sold (or to be sold) from the 1969 crop is estimated at close to 2.5 billion bushels, 7% more than from the 1968 crop. This would be 54% of total production, compared with 53% last year. The percentage sale of oats from the 1969 crop also is estimated to be up slightly while grain sorghum and barley dropped a little. Sorghum sales are estimated at 79% of production, oats 39% and barley 73%.

Hay sales are estimated to be up slightly in 1969/70 to 23.6 million tons--or 19% of the crop. With the season price averaging $24.90 a ton, the value of sales reached $587 million, about $32 million more than last year.

Final Signup Reaches 39½ Million Acres

Feed grain producers signed up to divert 39½ million acres from feed grains in 1970 (table 25). If actual diversion is about 95% of the acreage signed (the average of recent years), the acreage diverted would be about 37½ million acres, close to the Department's previously announced objective of about 38 million acres.

1969 and 1970 Signup Results

		1969	1970
Farms Enrolled	Thou.	1,662	1,614
Base acreage on enrolled farms			
Corn	Mil.	61.3	59.9
Sorghums	"	19.5	19.4
Barley	"	13.2	13.2
Total	"	94.0	92.5
Acreage signed for diversion 1/	"	41.3	39.5
Diversion as a % of base	Pct.	43.9	42.7

1/ Not reported by individual grains.

The intended feed grain diversion is 42.7% of the base acreage on signed farms, compared with 43.9% in 1969. Assuming the corn percentage also will be down slightly, the smaller base acreage on enrolled farms would indicate a corn acreage diversion of around 26 million acres--roughly a million less than in 1969. While base acreages of sorghums and barley on enrolled farms are close to last year's level, the acreage diverted may be slightly lower. In 1969 farmers diverted 7.5 million acres from sorghums and 4.4 million acres from barley.

CORN

Domestic Use Heavy; Smaller Carryover Expected

Heavy domestic use and exports of corn during October-March reduced April 1 stocks to slightly below 3.0 billion bushels, 2% less than a year ago. Total disappearance was close to 2.7 billion bushels, up 8% from last year. Domestic use was up 4%. Exports were up nearly 100 million bushels to 326 million.

Domestic use is expected to continue heavy during April-September, probably showing a larger increase over a year earlier than the 4% gain in October-March. Exports, on the other hand, probably will be well below the 307 million bushels shipped in April-September 1969. Total disappearance for the entire marketing year may increase to nearly 4.7 billion bushels. This would leave a carryover next October 1 of around 100 million bushels below the 1,113 million carried over last October 1.

April 1 Stocks Down 2%

Stocks of corn on April 1 were about 2% less than a year earlier, reflecting slight declines for both Government and "free" stocks (table 5). "Free" stocks on April 1 last year were well below April-September requirements (domestic use, exports and October 1 "free" carryover). In that period, 334 million bushels of corn

Table 4.--Corn and sorghum grain: Supply and distribution, average 1963-67, annual 1963-69

Item	Year beginning October							
	Average 1963-67	1963	1964	1965	1966	1967	1968 1/	1969 2/
	Million bushels							
	CORN							
Supply								
Carryover (October 1)	1,142	1,365	1,537	1,147	840	823	1,162	1,113
Production	4,093	4,019	3,484	4,084	4,117	4,760	4,393	4,578
Imports	1	1	1	1	1	1	1	1
Total supply	5,236	5,385	5,022	5,232	4,958	5,584	5,556	5,692
Distribution								
Food and Industry 3/								
Wet-process products 4/	204	195	201	204	205	213	219	225
Dry-process products:								
Breakfast foods 5/	20	19	19	20	21	21	22	22
Cornmeal, hominy and grits 5/ 6/	113	112	110	111	117	117	114	115
Alcohol and distilled spirits	30	26	28	30	33	34	33	33
Total	367	352	358	365	376	385	388	395
Domestic Use								
Food and industrial products 3/	347	329	338	348	355	365	373	380
Seed	12	11	11	13	14	12	12	13
Livestock feed 7/	3,200	3,008	2,956	3,344	3,279	3,412	3,522	3,724
Total domestic use	3,559	3,348	3,305	3,705	3,648	3,789	3,907	4,117
Exports								
Grain	555	477	550	670	466	613	521	535
Products 3/	20	23	20	17	21	20	15	15
Total	575	500	570	687	487	633	536	550
Total utilization	4,134	3,848	3,875	4,392	4,135	4,422	4,443	4,667
Carryover at end of year	1,102	1,537	1,147	840	823	1,162	1,113	1,025
	SORGHUM GRAIN							
Supply								
Carryover (October 1)	501	655	649	566	391	244	289	288
Production	644	585	490	673	715	756	740	743
Total supply	1,145	1,240	1,139	1,239	1,106	1,000	1,029	1,031
Distribution								
Domestic Use								
Food and industry 8/	11	11	11	11	11	11	11	11
Seed	2	2	2	2	2	2	2	2
Livestock feed 7/	517	471	412	569	601	532	622	668
Total domestic use	530	484	425	582	614	545	635	681
Exports (grain only)	187	107	148	266	248	166	106	80
Total utilization	717	591	573	848	862	711	741	761
Carryover at end of year	428	649	566	391	244	289	288	270

1/ Preliminary. 2/ Preliminary; utilization and carryover at end of year based on indications in May 1970. 3/ Total quantities processed and breakdown between domestic use and exports. 4/ Used in production of starch, sirup and sugar; reported by members of Corn Refiners Association, Inc., 1963-66; 1967 to date unofficial estimates. 5/ Revised 1963 to date on basis of 1967 Census of Manufactures. 6/ Estimated quantities used commercially for food, for brewers' use and for farm household use. 7/ Residual; includes small quantities for other uses and waste. 8/ Alcohol, distilled spirits and wet-processing (not reported separately).

were withdrawn from Government stocks, principally through repayment of loans. "Free" stocks carried over last October 1 were estimated at 377 million bushels, about 70 million less than in the 2 preceding years. Some further reduction may occur this year. If "free" stocks next October 1 are to total about as large as last year, another substantial withdrawal of corn from Government stocks will be necessary during April-September.

Corn: April 1 "free" stocks and April-September use

	1968	1969	1970
		Mil. bu.	
April 1 "free" stocks	2,445	1,971	1,956
April-September:			
Domestic use	1,751	1,621	1/1,740
Exports	291	307	1/225
Total	2,042	1,928	1,965
From Govt. stocks 2/	45	334	
"Free" carryover	448	377	

1/ Forecast May 1970.
2/ Net withdrawal from CCC stocks or from the loan program.

Price Support Activity Near Last Year's Rate

Farmers placed 390 million bushels of 1969-crop corn under loan through April 30, about the same as in that period of 1968/69. Farmers have redeemed more corn so far this year than last, leaving 343 million bushels under loan on May 1, 17 million less than a year ago. Based on present corn supplies and prospective requirements, farmers likely will again redeem a substantial quantity during April-September this year.

All of the corn from the 1964, 1965 and 1966 crops will be redeemed or delivered to CCC this spring and summer since the loans have not been extended on this corn. The redemption price of the 67 million bushels of 1964 and 1965 corn under loan on May 1, was over $1.20 a bushel; most of this corn probably will be delivered to CCC. But much of 1966 corn, which carries a redemption price of around $1.13 per bushel, probably will be redeemed.

Producers may reseal farm stored corn under loan from the 1967, 1968 and 1969 crops. While some of the 1967 and 1968 corn may be redeemed, likely heaviest redemption will be 1969 corn which carries a U.S. average redemption price of about $1.08 per bushel. Last year, farmers redeemed 263 million bushels of their 1968 crop and delivered only 11 million bushels to CCC.

CCC sales of corn have continued relatively small this year, totaling only 32 million bushels during October-April and probably will not increase materially in the second half of the marketing year.

Corn under loan May 1, 1970 and redemption price

Crop of	Under reseal	Redemption price: Loan rate	Redemption price: Interest 1/	Redemption price: Total
	Mil. bu.	- - -	Dol.	- - -
1964	31	1.10	.21	1.31
1965	36	1.05	.18	1.23
1966	78	1.00	.13	1.13
1967	129	1.05	.10	1.15
1968	119	1.05	.06	1.11
1969	2/343	1.05	.03	1.08
	April 15 farm price $1.15			

1/ Approximate accrued interest through June 30, 1970; assumes that the corn was placed under loan during the harvest period. 2/ Under loan on May 1.

Prices Advance Seasonally

Corn prices advanced seasonally during April and May, following a period of fairly stable prices during January-March. The price of No. 2 Yellow corn at Chicago rose from around $1.25 per bushel during January-March to $1.29 in April and averaged close to $1.31 in the first half of May. The strong domestic demand for corn and the heavy utilization during October-March, as indicated by the April 1 stocks report, have strengthened prices in recent weeks.

Table 5.--Feed grain stocks: Government and "free," April 1, 1969 and 1970

Item	Corn		Grain sorghum		Oats		Barley		Total 4 feed grains	
	1969	1970	1969	1970	1969	1970	1969	1970	1969	1970
	Million bushels								Million tons	
Under loan 1/										
Old grain resealed	445	394	55	53	43	84	32	70	15.5	15.6
Under price support from preceding crop 2/	368	354	61	32	76	135	86	42	15.3	14.0
Owned by CCC	257	285	192	170	46	77	7	49	13.5	15.1
Total Government 1/	1,070	1,033	308	255	165	296	125	161	44.3	44.7
"Free" 3/	1,971	1,956	235	251	387	376	158	166	71.7	71.8
Total U.S. stocks	3,041	2,989	543	506	552	672	283	327	116.0	116.5

1/ Based on reports of Agricultural Stabilization and Conservation Service. 2/ Total quantity placed under loan less repayments and deliveries to CCC through March 31. 3/ Residual; privately held stocks.

Table 6.--Feed grain stocks: Government and "free," April 1, 1960-70

Stocks	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970 1/
	Million bushels										
	CORN										
Government 2/	1,780	2,134	1,863	1,704	1,566	1,327	981	534	760	1,070	1,033
"Free"	1,555	1,539	1,526	1,344	1,712	1,478	1,882	2,181	2,445	1,971	1,956
Total	3,335	3,673	3,389	3,048	3,278	2,805	2,863	2,715	3,205	3,041	2,989
	GRAIN SORGHUM										
Government 2/	591	739	741	696	703	661	545	285	268	308	255
"Free"	153	121	110	131	137	107	179	241	249	235	251
Total	744	860	851	827	840	768	724	526	517	543	506
	OATS										
Government 2/	46	43	42	50	73	98	112	95	101	165	296
"Free"	437	515	452	436	439	363	424	347	344	387	376
Total	483	558	494	486	512	461	536	442	445	552	672
	BARLEY										
Government 2/	112	103	66	72	60	44	26	21	48	125	161
"Free"	133	143	150	160	169	155	167	186	170	158	166
Total	245	246	216	232	229	199	193	207	218	283	327
	4 FEED GRAINS (Mil. tons)										
Government 2/	69.8	83.6	75.2	69.7	66.1	58.3	45.1	25.0	31.6	44.3	44.7
"Free"	58.0	58.2	56.6	52.1	62.9	53.9	68.5	77.8	85.0	71.7	71.8
Total	127.8	141.8	131.8	121.8	129.0	112.2	113.6	102.8	116.6	116.0	116.5

1/ Preliminary. 2/ Total under loan and owned by CCC.

Table 7.--Corn: Price support activity, monthly, 1967-69 crops

Item	Unit	Cumulative through:											
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June 1/	July 1/	Aug. 1/	Sept. 1/
1967 Crop Loan													
$1.05 a bu.													
Placed under price support 2/	Mil. bu.	5	52	194	347	387	411	420	427	439	447	453	497
Redemptions	"	---	---	---	2	5	11	21	34	49	69	88	95
Delivered 2/	"	---	---	---	---	---	---	---	---	1	1	21	77
Net under loan	"	5	52	194	345	382	400	399	393	389	377	344	325
Farm price	$ a bu.	1.04	.975	1.03	1.04	1.06	1.06	1.06	1.09	1.07	1.04	.986	1.01
Price above + or below - loan	¢ a bu.	-1	-7	-2	-1	+1	+1	+1	+3	+2	-1	-6	-4
1968 Crop Loan													
$1.05 a bu.													
Placed under price support	Mil. bu.	10	72	180	330	367	385	393	396	399	402	403	404
Redemptions 2/	"	---	---	1	3	9	17	33	63	104	154	212	248
Delivered	"	---	---	---	---	---	---	---	---	---	---	7	8
Net under loan	"	10	72	179	327	358	368	360	333	285	248	184	148
Farm price	$ a bu.	.962	1.04	1.05	1.08	1.09	1.09	1.12	1.19	1.18	1.18	1.18	1.15
Price above + or below - loan	¢ a bu.	-9	-1	0	+3	+4	+4	+7	+14	+13	+13	+13	+10
1969 Crop Loan													
$1.05 a bu.													
Placed under price support	Mil. bu.	9	52	167	337	366	382	390					
Redemptions	"	---	---	---	4	12	28	47					
Delivered	"	---	---	---	---	---	---	---					
Net under loan	"	9	52	167	333	354	354	343					
Farm price	$ a bu.	1.12	1.07	1.09	1.12	1.14	1.13	1.15					
Price above + or below - loan	¢ a bu.	+7	+2	+4	+7	+9	+8	+10					

1/ Includes transactions completed after the expiration of the June 30 loan application date. 2/ Includes non-recourse loan, deliveries under the purchase program and quantity resealed not previously put under loan.

Table 8.--Corn and sorghum grain: Disposition of quantities placed under price support, 1965-68 crops

Item	1965		1966		1967		1968 1/	
	Corn	Sorghum grain	Corn	Sorghum grain	Corn	Sorghum grain	Corn	Sorghum grain
	Million bushels							
Placed under price support 2/	214.9	106.0	263.0	27.7	497.0	65.3	404.0	74.0
Redeemed by farmers 3/	152.6	12.3	129.1	21.8	104.8	28.7	263.0	38.0
Delivered to CCC 4/	.2	75.0	0.2	0.1	116.7	1.5	11.0	5.0
Resealed	62.1	18.7	133.7	5.8	275.5	35.1	130.0	31.0

1/ Preliminary. 2/ Placed under loan for 1965-68 crops, plus quantities delivered to CCC under purchase agreement program. 3/ Residual. Grain on which loans are repaid or purchase agreement grain not delivered. 4/ Deliveries from the original program only; excludes deliveries from the reseal program and overdeliveries.

Compiled from fiscal and operating reports of the Agricultural Stabilization and Conservation Service.

Corn prices probably will continue strong this summer. The large quantity of corn under loan, which may be redeemed at below the current market price, however, will tend to limit the seasonal rise in prices in the second half of the marketing year. If prospects continue favorable for the 1970 crop, at least the usual seasonal decline would be expected next fall with the harvesting of the 1970 crop.

Chicago corn prices

[No. 2 Yellow]

	1968/69	1969/70
	Dol. per bu.	
Oct.	1.08	1.18
Nov.	1.15	1.18
Dec.	1.16	1.19
Jan.	1.20	1.26
Feb.	1.18	1.26
Mar.	1.18	1.24
Apr.	1.23	1.29
May 1	1.29	1.31
8	1.32	1.31
15	1.32	1.31
22	1.34	
June	1.32	
July	1.28	
Aug.	1.29	
Sept.	1.25	
Av.	1.22	

Prices received by farmers averaged $1.12 per bushel during October-April, 6¢ higher than in that period of 1968/69. The increase over a year earlier probably will be less during the remainder of the marketing year. As was the case last year, farmers probably will redeem substantial quantities of corn under loan this summer since prices are well above the loan rate. Farmers can reclaim the 343 million bushels of 1969 corn now under loan at a U.S. average repayment rate of around $1.08 a bushel. The 325 million bushels of 1966-68 corn also can be redeemed at near or below the current market price.

Exports Meeting Increased Competition

Exports of corn, which totaled 326 million bushels during October-March, have been meeting increasing competition this spring from the Southern Hemisphere crops. Exports during April-September are expected to fall well below the heavy movement in the first half of the year, probably down by 100 million bushels or so. Exports in April were estimated at about 35 million bushels, down sharply from the monthly average of 54 million during October-March. Foreign demand for corn also will be influenced to some extent by grain production in Europe. This will have some influence on our exports late this summer, but the major effect would come in 1970/71.

Argentine corn supply and use

Item	April-March marketing year		
	1968/69	1969/70	1970/71
	Million bushels		
Carryover	1	---	---
Production	258	270	370
Total	259	270	370
Domestic use	123	144	
Exports	136	126	
Total	259	270	

Argentine Corn Crop Up More Than A Third

Weather has continued favorable for the 1970 Argentine corn crop, estimated in late April at about 370 million bushels, 38% more than in 1969. The larger crop this year would indicate exports will be well above the 126-136 million bushels exported in the past 2 April-March marketing years. Argentina's domestic requirements in recent years have ranged from 120-150 million bushels.

South African Crop Above Last Year's Output

A South African corn crop of about 280 million bushels is being harvested this spring, about 85 million more than in 1969. Including the 32-million-bushel carryover on May 1, the 1970/71 supply is estimated at 312 million bushels, up 25% from last year. This would provide substantially more corn for export than in 1969/70 but exports may fall somewhat below the 1968/69 level of 106 million bushels. Domestic use, which has increased in recent years, totaled nearly 200 million bushels in each of the past 2 years.

South African corn supply and use

Item	May-April marketing year		
	1968/69	1969/70	1970/71
	Million bushels		
Carryover	121	30	32
Production	209	195	280
Total	330	1/250	312
Domestic use	194	194	
Exports	106	24	
Total	300	218	

1/ Including imports.

GRAIN SORGHUM

Smaller Carryover in Prospect

Heavier consumption of grain sorghums during October-March reduced stocks on April 1 to 506 million bushels, 7% below a year earlier. Domestic use dropped rather sharply in January-March from the very high level in October-December, but for the 6 months still totaled 5% above a year earlier. Government stocks were down 53 million bushels, but "free" stocks were up a little. While domestic consumption is expected to continue above a year earlier during April-September, exports are expected to be much smaller. Total use in the second half of the year may drop a little below the 255 million bushels for that period of 1969. The carryover next October 1 is now expected to be below the 288 million bushels carried over on October 1 last year (table 4).

Exports Drop in Recent Weeks

Exports of grain sorghums, which averaged about 10 million bushels per month during October-March, dropped to only about 5 million in April. This decline comes in response to increased grain sorghum production in Argentina and other countries which will compete with the United States in world markets during April-September. Much of the loss will be in exports to Japan which in recent years has become the major market for U.S. grain sorghums. Of the 61 million bushels of grain sorghums exported in October-March, 73% went to Japan. During April-September, much smaller grain exports are in prospect. They may be only about a third of the 62 million bushels exported in that period of 1969.

Argentina will be the main source of competition during the next 6 months. The Argentine grain sorghum crop harvested this spring is estimated at close to 140 million bushels or about 40% larger than the 1969 crop. Argentina has recently made substantial sales of grain sorghums to Japan and smaller quantities to European countries.

Price Support Activity Down Sharply From Last Year

Through April, farmers had placed only about 40 million bushels of grain sorghums under loan, much less than the 73 million placed under loan in the same period of 1968/69. The reduced price support activity this year has been due largely to substantially higher prices resulting from the increased demand from cattle feeders and heavier exports during October-March. In 1969, prices rose substantially above the loan rate during April-September, and farmers redeemed a large part of the 73 million bushels

Table 9.--Corn, sorghum grain and soybean meal: U.S. exports to specified countries, 1967-69

Country of destination	Year beginning October						
	1967			1968			1969 1/
	Oct.-Mar.	Apr.-Sept.	Total	Oct.-Mar.	Apr.-Sept.	Total	Oct.-Mar.
	Corn 2/- Million bushels						
Canada 3/	18.9	29.5	48.4	27.2	44.6	71.8	26.7
United Kingdom	37.4	27.9	65.3	30.2	25.4	55.6	35.1
Belgium-Luxembourg	11.3	10.7	22.0	9.1	10.8	19.9	12.8
Germany, West	27.3	26.3	53.6	14.0	17.0	31.0	17.3
Germany, East	4.7	4.8	9.5	7.3	3.9	11.2	11.9
Netherlands	67.2	52.5	119.7	38.2	34.5	72.7	33.4
Italy	47.6	31.0	78.6	25.5	37.5	63.0	13.4
Greece	3.5	4.1	7.6	6.3	4.9	11.2	10.6
Spain	28.2	4.5	32.7	3.5	8.1	11.6	20.8
Japan	47.5	54.7	102.2	43.4	77.8	121.2	101.2
Other	38.1	35.5	73.6	17.4	33.7	51.1	34.4
Total	331.7	281.5	613.2	222.1	298.2	520.3	317.6
	Grain sorghum - Million bushels						
Belgium-Luxembourg	9.9	1.8	11.7	.8	.7	1.5	4.1
Netherlands	7.6	3.3	10.9	1.2	.4	1.6	.9
Germany, West	2.2	.6	2.8	.1	4/	.1	4/
Czechoslovakia	---	---	---	---	---	---	---
Japan	45.8	35.4	81.2	34.7	35.7	70.4	44.9
India	20.5	1.4	21.9	---	11.6	11.6	---
Israel	7.5	10.3	17.8	5.5	10.2	15.7	10.1
Other	9.0	10.9	19.9	1.9	3.6	5.5	1.4
Total	102.5	63.7	166.2	44.2	62.2	106.4	61.4
	Soybean meal - 1,000 short tons						
Canada	115.0	112.8	227.8	165.7	137.6	303.3	130.8
Denmark	47.8	18.2	66.0	17.0	1.3	18.3	29.0
United Kingdom	58.3	23.7	82.0	19.2	19.3	38.5	20.1
Netherlands	282.5	264.6	547.1	242.4	273.4	515.8	300.1
Belgium-Luxembourg	159.7	80.8	240.5	114.7	52.2	166.9	111.5
France	255.6	239.9	495.5	214.8	257.0	471.8	306.8
Germany, West	292.3	215.9	508.2	287.6	348.9	636.5	542.4
Spain	.3	14.6	14.9	31.6	64.5	96.1	34.1
Italy	78.3	112.2	190.5	101.1	130.8	231.9	172.0
Yugoslavia	47.0	66.6	113.6	39.8	103.5	143.3	55.5
Hungary	26.6	23.9	50.5	---	28.6	28.6	53.9
Japan	4/	16.2	16.2	18.5	1.4	19.9	24.1
Other	178.6	168.0	346.6	114.0	259.4	373.4	260.9
Total	1,542.0	1,357.4	2,899.4	1,366.4	1,677.9	3,044.3	2,041.2

1/ Preliminary. 2/ Grain only including seed; but excludes corn exported under the Food for Peace or charity program. 3/ Includes substantial quantities transhipped to other countries. 4/ Less than 50,000 bushels or 50 tons.

Compiled from reports of the Bureau of Census by the Foreign Agriculture Service, USDA.

placed under loan. Through April this year farmers had redeemed about 8 million bushels of 1969-crop sorghums and additional redemptions appear likely this spring and summer.

Prices Weaker in Recent Weeks

Sorghum grain prices have weakened in recent weeks influenced by the larger "free" stocks and the sharp reduction in exports. Prices received by farmers dropped 7¢ per cwt. from March to April, with the greatest decline occurring in Texas where prices have been relatively high as compared with the Kansas-Nebraska area. The recent decline in sorghum prices brought the April prices to $1.80 per cwt. which was 88% of corn or about the same as the long-term average. In October-March the average farm price of grain sorghums was $1.91 per cwt., 12% higher than a year earlier and 96% of the price of corn. There probably will be less pressure on "free" supplies of grain sorghums in April-September this year than last due to larger "free" stocks on April 1 and reduced export demand. Last year, prices rose more than seasonally during the marketing year, averaging $1.85 per cwt. during April-September.

Kansas City milo prices

[No. 2 Yellow]

	1968/69	1969/70
	Dol. per cwt.	
Oct.	1.81	2.08
Nov.	1.88	2.08
Dec.	1.90	2.06
Jan.	1.96	2.06
Feb.	1.95	2.04
Mar.	1.94	2.01
Apr.	1.98	2.04
May 1	2.03	2.02
8	2.01	1.98
15	2.03	1.97
22	2.02	
June	2.04	
July	2.07	
Aug.	2.11	
Sept.	2.08	
Av.	2.00	

OATS

Record Carryover in Prospect

The large 1969/70 oat supply has not been matched by increased consumption. A record carryover, probably totaling around 475 million bushels, is in prospect for next July 1. While the 1969 oat crop totaled 950 million bushels, 10% above the 1963-67 average, July-March disappearance was slightly below average, leaving record stocks on April 1. The record carryover of oats in prospect, along with the prospective larger acreage this year, would indicate another large supply for 1970/71.

Stocks of oats on April 1 totaled 672 million bushels, 120 million more than a year earlier. While "free" stocks were a little smaller, Government stocks were by far the largest on record for that date, totaling nearly 300 million bushels, 130 million more than a year ago. This includes 135 million bushels under loan from the 1969 crop, 84 million bushels of old grain resealed on farms and 77 million bushels owned by CCC.

Supplies Large in the Northern Plains

Much of the buildup in stocks in recent years has been in the Northern Plains area. In 5 important Northern producing States, production rose to 481 million bushels in 1969 compared with 1962-66 average of around 363 million bushels. On the other hand, production in 7 Midwestern States dropped rather sharply from 572 million bushels in 1957-61 to only 323 million in 1969. Production in most other areas also has declined.

The increased production in the Northern Plains was accompanied by a buildup of stocks in this area as consumption has not kept pace with production.

Table 10.--Oats and barley: Supply and distribution, average 1963-67, annual 1963-69

Item	Year beginning July							
	Average 1963-67	1963	1964	1965	1966	1967	1968 1/	1969 2/
	Million bushels							
	OATS							
Supply								
Carryover (July 1)	290	273	312	277	316	270	273	375
Production	867	966	852	927	801	789	939	950
Imports 3/	4	4	4	3	4	3	2	2
Total supply	1,161	1,243	1,168	1,207	1,121	1,062	1,214	1,327
Distribution								
Breakfast Food 4/ 5/	46	46	46	46	46	48	48	49
Domestic Use								
Breakfast food 4/ 5/	44	45	45	45	43	44	44	45
Seed	60	65	61	60	53	60	61	63
Livestock feed 6/	751	815	780	749	735	675	726	739
Total domestic use	855	925	886	854	831	779	831	847
Exports								
Breakfast food 4/	2	1	1	1	3	4	4	4
Grain	14	5	4	36	17	6	4	1
Total exports	16	6	5	37	20	10	8	5
Total utilization	871	931	891	891	851	789	839	852
Carryover at end of year	290	312	277	316	270	273	375	475
	BARLEY							
Supply								
Carryover (July 1)	121	146	132	100	105	122	138	199
Production	387	393	386	392	393	373	423	417
Imports 3/	10	13	12	8	7	8	10	10
Total supply	518	552	530	500	505	503	571	626
Distribution								
Domestic Use								
Industrial alcohol and alcoholic beverages	98	91	95	97	103	104	108	110
Food products 5/ 7/	8	7	7	8	8	8	8	8
Seed	17	18	16	17	16	17	16	17
Livestock feed 5/	219	233	251	196	211	205	227	246
Total domestic use	342	349	369	318	338	334	359	381
Exports								
Products	2	3	3	2	2	2	2	1
Grain	55	68	58	75	43	29	11	19
Total	57	71	61	77	45	31	13	20
Total utilization	399	420	430	395	383	365	372	401
Carryover at end of year	119	132	100	105	122	138	199	225

1/ Preliminary.
2/ Preliminary; utilization and carryover at end of year based on indications in May 1970.
3/ Includes grain equivalent of products.
4/ Total processed into oatmeal and prepared oat cereals and breakdown between domestic use and exports.
5/ Revised 1963 to date on basis of 1967 Census of Manufactures.
6/ Residual; includes small quantities for other uses and waste.
7/ Includes barley used in malt for food, pearl barley and prepared cereals.

On April 1, 445 million bushels were held in the Northern Plains area compared with 167 million in the Midwestern States and 60 million in all other States.

Oat production and April 1 stocks

Year	Five Northern States 1/	Seven Midwestern States 2/	Other States	U.S.
	Million bushels			
Average				
1957-61	376	572	233	1,181
1962-66	363	401	148	912
1967	353	322	114	789
1968	426	374	139	939
1969	481	323	146	950
	April 1 stocks			
1963-67	248	184	55	487
1968	258	148	39	445
1969	315	183	54	552
1970	445	167	60	672

1/ Minn., N. Dak., S. Dak., Nebr., and Mont. 2/ Ohio, Ind., Ill., Mich., Wis., Mo., and Iowa.

Prices Remain Below Loan

Oat prices remained below the loan rate this winter and spring after a moderate rise from the seasonal low point reached last August. During November-April, prices received by farmers were stable at 58-59¢ per bushel, 4¢ or 5¢ below the U.S. average loan rate.

Prices have been especially low this year in the Northern Plain States where the bulk of the surplus stocks is located. In North Dakota, April prices averaged only 49¢ per bushel, 10-15¢ lower than in most Midwestern States. The price in North Dakota also was low in relation to corn, averaging only 83% of corn per 100 pounds. Oat prices were about 10% lower than corn in Illinois, but ranged from 95% to 105% of corn in most of the other Corn Belt States.

The larger oat acreage in prospect for 1970, along with a record carryover, will probably bring seasonally lower prices this summer. They are expected to continue lower in relation to most other feeds, probably averaging below the loan rate again in 1970/71.

BARLEY

Larger Carryover Expected

The larger 1969/70 supply of barley has been accompanied by only a modest increase in consumption. Domestic use during July-March totaled 296 million bushels, 20 million more than a year earlier. Allowing for a little larger domestic use during April-June, the total for the year is expected to be about 7% above 1968/69. Exports have been negligible so far this year but will be heavy in the last quarter due to CCC sales for export.

Carryover on July 1 may be up to around 225 million bushels, about 25 million larger than on July 1, 1969. With a carryover of this size, a continuation of favorable prospects for the 1970 crop would give another big supply in 1970/71, possibly reaching a record high of close to 700 million bushels.

Barley stocks on April 1 totaled 327 million bushels, 16% larger than on that date last year. While "free" stocks were a little higher than last year, most of the increase was in stocks under loan or owned by CCC (table 5).

CCC Sales Boost U.S. Exports

The sale of 38 million bushels of barley by CCC to foreign countries under the Export Sale Program will boost total exports in the last quarter of 1969/70 as well as in the early part of the 1970/71 marketing year. About half of the quantity sold probably will be exported during April-June, leaving the remaining half to be exported during July-September. Commercial exports have been very small during 1969/70, totaling less than 3 million bushels during July-March, including malt.

Total exports for the 1969/70 marketing year are now estimated at about 20 million bushels, 7 million more than last year but well below the 1963-67 average. The remainder of CCC sales, or about 20 million bushels, would be shipped in 1970/71. Exports in 1970/71 will be larger than this year's, if commercial exports increase from this year's low level or additional barley is sold from CCC stocks for export.

Prices Drop Back to the Loan Rate

U.S. average barley prices dropped back to 83¢ per bushel in March and April after ranging from 86¢ to 89¢ per bushel during October to February. Since mid-April, market prices at Minneapolis have strengthened, indicating some tightening of "free" supplies in that area.

During October-March, U.S. barley prices averaged about 90% of corn, about in line with the relative feeding value. April barley prices were down to 84% of corn, well below the 1964-68 April average of 97%. A favorable growing season for barley would be expected to keep prices generally low this summer in relation to prices of competing feeds.

Minneapolis barley prices

[No. 3]

	1968/69	1969/70
	Dol. per bu.	
July	1.07	1.09
Aug.	1.05	1.00
Sept.	1.20	1.06
Oct.	1.18	1.08
Nov.	1.15	1.07
Dec.	1.14	1.07
Jan.	1.19	1.06
Feb.	1.18	1.06
Mar.	1.17	1.07
Apr.	1.17	1.09
May 1	1.17	1.12
8	1.17	1.14
15	1.19	1.15
22	1.21	
June	1.14	
Av.	1.15	

TOTAL FEED CONCENTRATES

Record Tonnage to Be Fed in 1969/70

The total tonnage of all feed concentrates fed in 1969/70 will likely reach a record high of around 180 million tons, up nearly 5% from last year and 16% above the 1963-67 average. During October-March, 102 million tons were fed, nearly 3 million more than in the first half of 1968/69. In April-September last year, the tonnage fed dropped sharply from the heavy feeding in October-March (table 12). The quantity fed reached an alltime high of .87 ton per animal unit for the first half of the year then dropped to .64 for the second half, a little less than in that period of 1967/68.

Assuming a more nearly normal pattern this year, the April-September tonnage is expected to be around 5% to 10% higher than a year ago. The larger number of hogs to be fed this year than last will be accompanied by continued heavy feeding of other types of livestock. The 1969/70 rate of feeding per animal unit is now expected to increase to about 1.55 tons, 3% over last year's high level and 8% above the 5-year average.

Favorable Price Ratios Bring Liberal Feeding and Heavier Weights

Livestock-feed price ratios have continued generally favorable to livestock and poultry producers during 1969/70. Favorable ratios have been largely responsible for liberal feeding per animal and the heavier weights of cattle and hogs this year. The number of cattle on feed was 5-10% above a year ago during October-April, and average weights of slaughter steers and heifers have been 3 or 4% higher.

Table 11.--Feed concentrate balance, animal units, and feed per unit, average 1963-67, annual 1963-69

Item	Year beginning October 1/							
	1963-67 average	1963	1964	1965	1966	1967	1968 2/	1969 3/
	Million tons							
Supply of all concentrates	243.9	250.4	237.6	247.2	235.1	249.1	256.4	262.8
Concentrates fed 4/								
Feed grains	121.2	116.3	111.6	126.3	125.6	126.1	133.8	141.2
Wheat and rye	3.5	1.7	3.5	3.6	3.9	4.6	5.5	4.6
Byproduct feeds	30.7	30.2	30.1	31.1	31.2	31.1	32.9	34.2
Total	155.4	148.2	145.2	161.0	160.7	161.8	172.2	180.0
Grain-consuming animal units (Mil.) 5/	108.7	108.3	105.9	106.3	111.5	111.5	113.7	116.2
Supply of all concentrates per animal unit (Tons)	2.24	2.31	2.24	2.33	2.11	2.23	2.26	2.26
All concentrates fed per animal unit (Ton)	1.43	1.37	1.37	1.51	1.44	1.45	1.51	1.55

1/ Except oat and barley supplies which start on July 1. 2/ Preliminary. 3/ Based on indications in May 1970. 4/ Total quantities fed, including domestically produced and imported grains and byproduct feeds. 5/ Revised series, see tables 15 and 27.

Table 12.--Feed concentrates consumed by livestock and poultry, semiannually, 1963-69

Item	Year beginning October							
	1963-67 average	1963	1964	1965	1966	1967	1968	1969 1/
Concentrates fed (Mil. tons)								
October-March	86.2	82.0	84.6	88.8	88.8	86.9	99.1	101.7
April-September	69.2	66.2	60.6	72.2	71.9	74.9	73.1	
Total	155.4	148.2	145.2	161.0	160.7	161.8	172.2	
Grain-consuming animal units fed annually (Mil.)	108.7	108.3	105.9	106.3	111.5	111.5	113.7	116.2
Concentrates fed per grain-consuming animal unit (Ton)								
October-March	.80	.76	.80	.84	.80	.78	.87	.88
April-September	.63	.61	.57	.67	.64	.67	.64	
Total	1.43	1.37	1.37	1.51	1.44	1.45	1.51	

1/ Preliminary.

Table 13.--Individual feeds as percentage of the total concentrate ration fed to milk cows in herds kept by dairy reporters, United States, 1956-69

Year	Corn	Small grains		Oilseed meals		Wheat bran, shorts	Commercial mixed feeds	Miscellaneous	Total
		Oats	Barley and wheat	Cottonseed meal	Soybean meal 1/				
	Percent								
1956	31.2	23.2	4.1	1.4	1.7	2.8	28.3	7.3	100.0
1957	32.0	21.6	4.1	1.2	1.9	3.2	29.2	6.8	100.0
1958	32.1	21.8	3.9	1.1	1.9	3.0	28.8	7.4	100.0
1959	33.7	21.6	3.5	.9	2.0	2.7	28.5	7.1	100.0
1960	35.2	18.5	3.1	.8	2.2	2.7	29.9	7.6	100.0
1961	36.2	17.7	3.5	.9	1.9	2.5	30.0	7.3	100.0
1962	36.7	16.0	2.9	.8	2.2	2.5	31.9	7.0	100.0
1963	38.1	15.8	2.8	.8	2.0	2.2	31.5	6.8	100.0
1964	37.9	14.7	2.5	.8	1.9	2.3	32.9	7.0	100.0
1965	37.5	15.1	2.8	.8	1.8	1.9	33.1	7.0	100.0
1966	37.7	13.6	2.9	.7	2.0	1.7	34.8	6.6	100.0
1967	37.0	12.6	3.0	.6	2.0	1.4	36.3	7.1	100.0
1968	37.4	12.2	2.9	.5	2.4	1.4	36.6	6.6	100.0
1969	36.9	11.4	3.1	.5	2.7	1.1	38.2	6.1	100.0

1/ Includes small quantities of soybeans.

Compiled from Milk Production, Crop Reporting Board, SRS, May 12, 1970 and earlier issues.

Table 14.--Grain and other concentrates fed to milk cows, and related factors, 1956-69

Calendar years	Grain and other concentrates fed to milk cows	Quantity fed per cow	Quantity fed per 100 pounds of milk	Milk-feed price ratio 1/	Price of dairy ration per 100 pounds 2/	Number of dairy cows January 1 3/
	1,000 tons	Lb.	Lb.	Lb.	Dol.	Mil.
1956	19,098	1,825	30.2	1.36	3.00	22.9
1957	19,946	1,945	31.2	1.39	3.00	22.3
1958	19,809	2,003	31.3	1.41	2.89	21.3
1959	19,803	2,050	31.5	1.43	2.89	20.1
1960	19,821	2,259	32.2	1.45	2.88	19.5
1961	20,916	2,404	33.2	1.45	2.89	19.3
1962	21,617	2,533	34.3	1.40	2.92	19.0
1963	21,858	2,646	35.1	1.36	3.01	18.4
1964	22,464	2,800	35.9	1.38	3.01	17.6
1965	22,827	2,953	36.7	1.40	3.02	17.0
1966	4/22,569	4/3,200	37.6	1.53	3.14	16.0
1967	4/22,790	4/3,374	38.3	1.56	3.22	15.2
1968	4/22,886	4/3,519	39.1	1.70	3.10	14.6
1969	4/23,615	4/3,726	40.7	1.74	3.15	14.2

1/ Pounds of dairy ration equal in value to one pound of wholesale milk or milkfat. 2/ Average value of concentrate ration in milk and cream selling areas. 3/ Cows and heifers 2 years old and over kept for milk. Number of dairy cows on farms January 1, 1970 estimated at 13.9 million head. 4/ Not comparable with data for earlier years.

Compiled from Milk Production, Crop Reporting Board, SRS, May 12, 1970 and earlier issues.

While the 1969 fall pig crop was 8% smaller than a year earlier, market weights of hogs this winter and spring have been running 3% or 4% higher. The spring pig crop is up about 6%. The hog-corn ratio averaged well above a year earlier during October-April, although it has declined a little from last February's very high level.

The broiler-feed price ratio was above average during the fall and winter months but declined this spring to below the favorable ratio of a year ago and also a little below average. Broiler production was about 12% above a year earlier during October-March and probably will continue higher this spring and summer.

The milk-feed price ratio has moved steadily upward in recent years and continued much higher than average during October-April. The rate of feeding per cow has been increasing along with the favorable price ratio. So far during 1969/70, dairy cows have received about 5% more feed per head than in the same period of 1968/69. These factors are all contributing to heavier feeding per animal unit in 1969/70.

Dairy Cow Feeding Continues Uptrend

Feeding of grains and other concentrate feeds to dairy cows in 1969 again set a record high. Reports from dairymen indicated that they fed 23.6 million tons of grain and other concentrates to their milk cows in 1969, slightly more than the year before and 19% above the quantity fed 10 years ago. 1/

The quantity of grain and other concentrates fed to dairy cows in the past 2 or 3 years has accounted for 14% or 15% of all concentrates fed to livestock and poultry. This is about the same as 10 years ago, indicating that they are about holding their own relative to consumption by other livestock and poultry.

The continued increase in concentrate feeding to dairy cows is due to heavier feeding per animal, more than offsetting the downtrend in numbers. On January 1, dairy cows were estimated at 13.9 million head, 0.3 million less than the year before. One significant fact about the number--the year-to-year decline was the smallest since 1962. For the 6 years preceding 1968, the decline averaged 0.8 million head annually.

The rise in feeding concentrates per cow over the years is phenomenal. In 1969 a typical dairy cow was fed 3,726 pounds of concentrate feed, 65% more than in 1960. Contributing to increased feeding rates has been the switch to cows of greater capacity for feed intake and milk output.

Wheat Feeding May Be Lower This Year

The quantity of wheat fed may be somewhat lower this spring and summer than the high rate in 1969. In July-September last year, wheat feeding was estimated at around 130 million bushels, one of the highest quarters in recent years. Wheat prices dropped below corn prices last summer in most areas of the country. Seasonally lower corn prices and advancing wheat prices brought wheat above corn this winter and spring. In April the U.S. average price received for wheat was $2.20 per cwt., 7% above corn. With the smaller 1970 wheat crop, prices may average a little higher in relation to corn this summer than last, which would tend to limit feeding. For the 1969/70 (October-September) feeding year, wheat feeding is now placed at about 4.6 million tons, about a million less than a year earlier.

1/ Milk Production, SRS, USDA, May 12, 1970.

LIVESTOCK UNIT SERIES REVISED

The animal unit and livestock production unit series have been revised from 1926 to date on the basis of feeding practices in the period 1959-61. The new

Table 15.--Grain-consuming animal units, United States, annual 1962-69

REVISED SERIES

Type of livestock	Year beginning October							
	1962	1963	1964	1965	1966	1967	1968 1/	1969 2/
	Million units							
Dairy cattle	20.8	20.0	19.2	18.1	17.2	16.7	16.1	15.9
Cattle on feed	18.9	19.2	19.4	20.5	21.9	22.2	24.5	25.9
Other cattle	5.2	5.6	5.8	5.9	5.9	6.0	6.0	6.1
Hogs	36.4	35.3	32.3	31.2	34.5	35.5	35.6	34.6
Poultry	25.6	26.2	27.2	28.7	30.1	29.2	29.7	31.9
Sheep	.9	.8	.8	.7	.7	.7	.6	.6
Horses and mules	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Total	109.0	108.3	105.9	106.3	111.5	111.5	113.7	116.2

1/ Preliminary. 2/ Based on May 1970 indications.

Source: National and State Livestock-Feed Relationships, ERS, Statistical Bulletin No. 446, February 1970.

series were published in National and State Livestock-Feed Relationships, ERS, Statistical Bulletin No. 446, February 1970.

The new series have been weighted on the basis of more recent feeding practices, using 1959-61 feeding rates as a base. The revised series of grain-consuming animal units, livestock production units and feeding rates per unit are carried in table 27 for the years 1926 to date. Table 15 gives a breakdown of the animal units by types of livestock for 1962 to date. The new series will replace the old series in the feed balance tables carried in the current and future issues of the Feed Situation and in Feed Statistics.

In the new series, dairy cattle and beef cattle on feed are weighted much heavier relative to other types of livestock than in the old series. Since the dairy cow is still considered as one unit, the heavier weight given to the dairy cow substantially reduced the total number of animal units. It also has resulted in a substantial increase in the rate of feeding per animal unit. Dairy cows are now fed much larger quantities of feed per head than in the earlier period. This is also the case for livestock production units, since the production of milk per cow in 1959-61 was much larger than in the earlier period (1940-45). The number of high-protein-consuming animal units also are lower in the new series (tables 20 and 21).

HIGH-PROTEIN FEEDS

Protein Feeding Up 5%

Combined feeding of 11 high-protein feeds (soybean meal equivalent) in 1969/70 now is expected to reach 19.6 million tons, 5% above last year (table 16). Strong demand for feed and more protein-consuming livestock and poultry are resulting in increased requirements for protein feed at heavy feeding rates. During October-March high-protein feed consumption totaled 10.1 million tons, up 4% from a year earlier.

Table 16.--High-protein feed: Quantity available for feeding and high-protein feed-consuming animal units, 1950-69

Year beginning October	Quantity available for feeding (in terms of 44% protein soybean meal equivalent)				High-protein-consuming animal units 1/	Per animal unit
	Oilseed meal	Animal protein	Grain protein	Total		
	1,000 tons				Million	Pounds
1950	7,798	2,470	1,069	11,337	111.9	203
1951	8,224	2,638	816	11,678	113.1	207
1952	8,079	2,663	767	11,509	111.0	207
1953	7,842	2,969	825	11,636	111.7	208
1954	7,809	2,931	853	11,593	113.3	205
1955	8,471	3,233	897	12,601	116.8	216
1956	9,350	3,005	857	13,212	115.2	229
1957	10,116	2,838	859	13,813	115.3	240
1958	11,143	3,056	903	15,102	119.4	253
1959	10,655	3,103	972	14,730	118.4	249
1960	11,259	3,281	947	15,487	121.8	254
1961	11,687	3,421	1,052	16,160	122.3	264
1962	11,976	3,543	1,069	16,588	125.0	265
1963	11,656	3,753	1,136	16,545	125.8	263
1964	11,804	3,557	1,181	16,542	125.8	263
1965	12,689	3,577	1,238	17,504	128.3	273
1966	12,561	3,950	1,250	17,761	133.0	267
1967	12,240	4,290	1,283	17,813	131.8	270
1968 2/	13,521	3,868	1,298	18,687	134.2	278
1969 3/	14,925	3,375	1,300	19,600	140.0	280

1/ Source: National and State Livestock-Feed Relationships, Statistical Bulletin No. 446, February 1970. Revised series, see tables 20 and 21. 2/ Preliminary. 3/ Based on May 1970 indications.

Table 17.--Processed feeds: Estimated use for feed, average 1963-67, annual 1963-69 1/

Item	Year beginning October							
	Average 1963-67	1963	1964	1965	1966	1967	1968	1969 2/
	1,000 tons							
HIGH-PROTEIN FEEDS								
Total oilseed meals	12,754	12,333	12,422	13,338	13,028	12,648	14,054	15,400
Animal proteins								
Tankage and meat meal	1,992	1,940	1,932	1,961	2,068	2,059	2,021	2,000
Fish meal and solubles	780	737	625	627	827	1,083	835	500
Milk products	719	786	751	729	680	650	620	640
Total	3,491	3,463	3,308	3,317	3,575	3,792	3,476	3,140
Grain protein feeds								
Gluten feed and meal	1,451	1,368	1,406	1,481	1,486	1,514	1,550	1,575
Brewers' dried grains	307	276	295	304	324	336	332	340
Distillers' dried grains	418	382	409	426	425	447	437	425
Total	2,176	2,026	2,110	2,211	2,235	2,297	2,319	2,340
OTHER PROCESSED FEEDS								
Wheat millfeeds	4,673	5,051	4,715	4,612	4,499	4,490	4,469	4,500
Rice millfeeds	418	373	395	395	451	476	494	500
Dried and molasses beet pulp	1,181	1,203	1,289	1,153	1,129	1,130	1,516	1,600
Alfalfa meal	1,532	1,322	1,536	1,652	1,599	1,550	1,664	1,650
Fats and oils	438	420	363	427	486	496	531	550
Molasses	2,962	2,890	2,900	2,860	3,060	3,100	3,310	3,450
Miscellaneous	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Total	12,304	12,359	12,298	12,199	12,324	12,342	13,084	13,350
Total all byproduct feeds	30,725	30,181	30,138	31,065	31,162	31,079	32,933	34,230

1/ Adjusted for stocks, production, foreign trade and nonfeed uses where applicable. 2/ Preliminary; based on indications in May 1970.

Table 18.--Oilseed meal: Supply and utilization, United States, October-March, 1968/69 and 1969/70

Item	Supply				Utilization		
	Stocks October 1 1/	Production	Imports	Total	Domestic use (feed) 2/	Exports	Stocks April 1 1/
	1,000 tons						
1968							
Soybean	145	7,360	---	7,505	5,954	1,366	185
Cottonseed	108	1,391	18	1,517	1,351	2	164
Linseed	14	151	1	166	116	32	18
Peanut	3	77	---	80	72	---	8
Copra	2	57	---	59	59	---	3/
Total	272	9,036	19	9,327	7,552	1,400	375
1969 4/							
Soybean	157	8,771	---	8,928	6,737	2,041	150
Cottonseed	65	1,334	1	1,400	1,250	4	146
Linseed	8	130	1	139	88	47	4
Peanut	2	70	---	72	67	---	5
Copra	1	52	---	53	53	---	3/
Total	233	10,357	2	10,592	8,195	2,092	305

1/ Stocks at processors' plants. 2/ Estimated quantities of soybean meal used for industrial purposes and cottonseed meal used for fertilizer on farms of cotton growers. 3/ Not reported. 4/ Preliminary.

Table 19.--Oilseed meal: Supply and utilization, United States, 1967/68, 1968/69 and 1969/70

Item	Supply				Utilization		
	Stocks October 1 1/	Production	Imports	Total	Domestic use (feed) 2/	Exports	Total
	1,000 tons						
1967							
Soybean	138	13,660	---	13,798	10,754	2,899	13,653
Cottonseed	105	1,424	44	1,573	1,462	3	1,465
Linseed	23	277	3/	300	182	104	286
Peanut	4	132	---	136	133	---	133
Copra	4/	119	---	119	117	---	117
Total	270	15,612	44	15,926	12,648	3,006	15,654
1968 5/							
Soybean	145	14,581	---	14,726	11,525	3,044	14,569
Cottonseed	108	2,029	29	2,166	2,086	15	2,101
Linseed	14	267	2	283	197	78	275
Peanut	3	134	---	137	135	---	135
Copra	2	110	---	112	111	---	111
Total	272	17,121	31	17,424	14,054	3,137	17,191
1969 6/							
Soybean	157	17,000	---	17,157	13,125		
Cottonseed	65	1,900	5	1,970	1,900		
Linseed	8	225	---	233	150		
Peanut	2	125	---	127	125		
Copra	1	100	---	101	100		
Total	233	19,350	5	19,588	15,400		

1/ Stocks at processors' plants. 2/ Estimated quantities of soybean meal used for industrial purposes and cottonseed meal used for fertilizer on farms of cotton growers. 3/ Less than 500 tons. 4/ Not reported. 5/ Preliminary. 6/ Forecast (except for stocks)--based on indications in May 1970.

Prices during this period averaged about 10% higher.

More broilers and hogs in prospect this summer should continue to stimulate demand for protein feed. If the total feed estimate is realized, then protein feeding during April-September would be up some 7% from that period last year.

High-protein consuming livestock and poultry are estimated at 140 million units (new series) for 1969/70, about 4% above a year ago. The feeding rate for the entire 1969/70 feeding season is expected to turn out a little higher than the 278 pounds per animal unit in 1968/69. During October-March, 144 pounds were fed per unit, about the same as a year earlier.

Soybean Meal Consumption Heavy; Prices Strengthen

Domestic feeding of soybean meal in October-March totaled 6,737,000 tons, 783,000 tons more than a year earlier. Demand is expected to continue strong in the last half of the feeding year. But the pending labor-processor wage contract negotiations this summer throw some uncertainty into the production outlook. Assuming production will be maintained at a high level, feeding for the entire season is placed at 13.1 million tons, about 1.6 million more than in 1968/69. This would come out of production of around 17.0 million tons, 2.4 million more than last year.

Soybean meal at Decatur averaged $78 per ton in October-April, $5 above a year earlier. However, prices have been erratic, dropping from a weekly high of $93 per ton in late January to below $70 in March. In early May, prices averaged $72 per ton, slightly below a year earlier. Wage contract negotiations, together with the strong demand, could result in a continuation of price instability this summer.

Cottonseed Meal Prices Higher; Supplies Lower

Strong demand, coupled with reduced supplies, is bringing higher cottonseed meal prices this season. During October-April, prices at Memphis averaged $72 a ton, $6 higher than in that period last year. In early May, prices were quoted at $66, $7 above a year ago. A good demand from cattle feeders and seasonally lower cottonseed meal production will give strength to prices this spring and summer.

Cottonseed meal available for feeding in the 1969/70 feeding year probably will total around 1.9 million tons, nearly 10% less than in 1968/69. In October-March, about 1,250,000 tons were fed, 100,000 less than a year earlier. Feeding is expected to be down about 75,000 to 100,000 tons in the last half of the feeding year.

Fish Meal Supplies Down Sharply

U.S. fish meal supplies (including solubles at dry weight) in October-September 1969/70 are now estimated at around 500,000 tons, down sharply from the 835,000 of a year ago. Domestic production may be about the same as the 295,000 tons in 1968/69. But imports may be only about 200,000 tons, much less than the 540,000 imported during 1968/69. During October-March, 98,000 tons were imported, only a third of those in that period last year.

Most of the drop in imports is due to an international shortage of fish meal, bringing with it relatively high prices. Peru's fish meal output in January-March was reported at 755,000 metric tons, up from the 583,000 tons in that period of a year earlier. The sharp increase occurred despite the closed season for fishing between mid-February and mid-March. Late reports indicate that catches since March 31 were good up until mid-May when the anchovy fishing season again was closed.

Another important development in the Peruvian situation is that fish meal marketing is now being controlled by the Peruvian government. This could eventually lead to a more stable situation as the government is concerned with conserving its anchovy resources.

Table 20.--High-protein consuming animal units, United States, 1962-69

REVISED SERIES

Type of livestock	1962	1963	1964	1965	1966	1967	1968 1/	1969 2/
				Million units				
Dairy cattle	21.5	20.6	19.8	18.7	17.8	17.2	16.7	16.4
Cattle on feed	10.9	11.1	11.3	11.9	12.7	12.9	14.2	15.0
Other cattle	12.5	13.5	14.0	14.0	14.0	14.2	14.2	14.6
Hogs	26.5	25.8	23.6	22.8	25.2	26.0	26.0	25.3
Poultry	52.0	53.4	55.8	59.6	62.0	60.3	62.0	67.7
Sheep	1.6	1.4	1.3	1.3	1.3	1.2	1.1	1.1
Total	125.0	125.8	125.8	128.3	133.0	131.8	134.2	140.1

1/ Preliminary. 2/ Based on May 1970 indications.

Source: National and State Livestock-Feed Relationships, Statistical Bulletin No. 446, February 1970.

Table 21.--High-protein consuming animal units and protein feed fed per animal unit, United States, 1926-68

REVISED SERIES

Year beginning October	Animal units	Protein feed fed per unit 1/	Year beginning October	Animal units	Protein feed fed per unit 1/
	Million	Pounds		Million	Pounds
1926	87.2	111	1948	105.5	182
1927	88.0	101	1949	106.8	191
1928	89.0	108	1950	111.9	203
1929	93.6	103	1951	113.1	207
1930	93.0	98	1952	111.0	207
1931	95.8	92	1953	111.7	208
1932	98.7	90	1954	113.3	205
1933	96.7	92	1955	116.8	216
1934	85.8	102	1956	115.2	229
1935	89.9	115	1957	115.3	240
1936	88.8	121	1958	119.4	253
1937	88.5	126	1959	118.4	249
1938	95.3	121	1960	121.8	254
1939	99.2	121	1961	122.3	264
1940	100.6	138	1962	125.0	265
1941	109.7	133	1963	125.8	263
1942	123.4	139	1964	125.8	263
1943	123.9	142	1965	128.3	273
1944	116.1	150	1966	133.0	267
1945	111.0	146	1967	131.8	270
1946	106.1	156	1968 2/	134.2	278
1947	101.8	167			

1/ In terms of 44 percent protein soybean meal equivalent. 2/ Preliminary.

Source: National and State Livestock-Feed Relationships, Statistical Bulletin No. 446, February 1970.

The Peruvian Fisheries Minister announced April 1 that no fish meal firms in Peru will be permitted to contract for fish meal shipments after September 30. Afterward, the government presumably will control the shipments. Also, the government will announce new taxes on meal to finance development of its food fish industry.

Tankage and Meat Meal Supplies Near Last Year's Level

Tankage and meat meal supplies are running a shade under their pace of a year ago, reflecting the slight drop in red meat production. October-March output was 1,006,000 tons compared with the 1,020,000 in that period of 1968/69. Production for the entire 1969/70 season is expected to be close to last year's 2,018,000 tons.

Prices fluctuated widely this season, influenced by short fish meal supplies and changes in the soybean meal supply-demand balance. Tankage prices at Chicago were quoted at $110 to $115 a ton in early May, about $25 lower than the early February peak, but about $25 above a year ago. Meat meal was priced at $100 to $115, up about $20 from a year earlier. Relatively low supplies and good demand will continue to give support to animal protein feed prices this spring and summer.

The 1970 issues of the *Feed Situation* are scheduled to be available February 6, April 13, May 28, August 28 and November 30.

Summaries of these issues are scheduled for release after 3:00 p.m. by the Press Service, Office of Information, USDA on January 29, April 6, May 21, August 21 and November 20

GRAIN SORGHUM TRENDS IN THE 1960's

jack s. ross

ABSTRACT: *Dominant grain sorghum trends in the 1960's included fairly stable acreage, moderately rising yields and production, sharply rising domestic feeding, fluctuating exports, declining carryover stocks, generally rising prices, and declining price support activity. Expansion in grain sorghum supplies contributed to the rapid growth of the cattle feed industry in the Southwest. Texas. Nebraska, Kansas, and Oklahoma account for 85% of the U.S. crop.*

KEY WORDS: *Grain sorghum, Southwestern cattle feeding.*

Milo, kafir, hegari ("high gear"), darso, sorgo, durra and shallu are all members of the sorghum family. Some are grown for grain, some for forage, and some for syrup. This article is concerned with sorghums produced for grain.

Members of the sorghum family were well known and intensively studied in the 1930's. But they did not come into their own until the introduction of hybrid seeds in the mid-1950's. Hybridization, so successful earlier in corn, proved similarly provident in sorghum. Development of systems for irrigating also contributed to increased sorghum yields. U.S. grain sorghum yields jumped from an average of 20 bushels per acre in 1954-56 to 33 bushels in 1957-59. Presently, yields are in the area of 55 bushels. The rise in yields caused production to soar from around 225 million bushels during the mid-1950's to a current level of 750 million.

Feed grain programs of the 1960's have held sorghum acreage below that of earlier years. Sorghum acreage in 1961-69 averaged 17 million compared with 22 million in 1954-60.

Of the 4 feed grains, sorghum has long had the best potential for semi-arid lands, such as in the Central and Southern Plains States of Nebraska, Kansas, Oklahoma and Texas. These 4 States account for 85% of the Nation's sorghum crop.

Some Impacts of Sorghum Expansion

To produce a commodity (or expand its output) there must be a market for it. Feeding of cattle in confinement (feedlots) became the primary market for sorghum in the Central and Southern Plains. Later came the development of the foreign market--although secondary. These events had their economic impacts within the main producing area and its adjoining agricultural areas. Here are two impacts:

1. Production of surplus sorghum in the Central and Southern Plains provides Colorado, New Mexico, Arizona and California with another grain source to go along with their barley crops and wheat feeding. Western States typically are deficit in feed grain production and must rely on substantial quantities of shipped-in grains. Thus, the sorghum expansion is beneficial for Western livestock producers.

Grain sorghum supplied the feed grain concentrate ingredient for a cattle fattening ration, along with cottonseed meal and roughage feeds that were already available in the Southwest. Molasses is obtained from sugar beet refiners in the area. And ports along the Gulf receive the bulk of molasses imports which make up a substantial share of U.S. molasses supplies. With cottonseed meal supplies

Table 22.--Summary of grain sorghum trends in the 1960's

Crop of -- and marketing year beginning October	Planted acreage	Yield per harvested acre	Production	Carryover		Total supply
				Government	"Free" [1]	
	Mil.	Bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
1960	20	40	620	563	18	1,201
1961	14	44	480	686	16	1,182
1962	15	44	510	644	17	1,171
1963	18	44	585	645	10	1,240
1964	17	42	490	640	9	1,139
1965	17	52	673	556	10	1,239
1966	16	56	715	365	26	1,106
1967	19	50	756	219	25	1,000
1968	18	53	740	250	39	1,029
1969 [2]	17	55	743	260	28	1,031
1970 [3]	19	58	839			

	Domestic use				Exports	Total use
	Feed	Food and industry	Seed	Total		
	Mil. bu.					
1960	415	11	2	428	71	499
1961	411	9	2	422	99	521
1962	391	10	2	403	113	516
1963	471	11	2	484	107	591
1964	412	11	2	425	148	573
1965	569	11	2	582	266	848
1966	601	11	2	614	248	862
1967	532	11	2	545	166	711
1968	622	11	2	635	106	741
1969 [4]	668	11	2	681	80	761

	Loan rate	Season average price		Price support activity		
		Without support payment	With support payment [5]	Placed under price support	Total delivered to CCC	Indicated redemptions by farmers [6]
	Dol. per cwt.			Mil. bu.		
1960	1.52	1.49	---	203	175	28
1961	1.93	1.80	---	196	194	2
1962	1.93	1.82	---	219	217	2
1963	1.71	1.74	2.03	141	128	13
1964	1.77	1.87	2.14	83	[7] 67	[7] 9
1965	1.65	1.76	2.08	106	[7] 77	[7] 21
1966	1.52	1.82	2.27	28	[7] [8]	[7] 24
1967	1.61	1.77	2.13	65	[7] 4	[7] 46
1968	1.62	1.70	2.13	74	[7] 5	[7] 51
1969	1.61	[2] 1.89	[2] 2.35	[9] 40	---	[9] 8
1970	1.61					

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[1] Residual; privately held. [2] Preliminary. [3] Based on March 1 prospective plantings. [4] Based on May indications. [5] U.S. season average price, plus average price support payments to participants. [6] Residual; data are only approximations as no adjustments are made for "over-deliveries" to CCC. [7] Through March 31, 1970, as loan program not completed. [8] Less than 500,000 bushels. [9] Through April 30.

becoming smaller and less dependable, urea has moved into the picture as a principal protein source for beef cattle rations. Sorghums, cottonseed meal and hulls, molasses, urea and roughages now are key feed ration ingredients used by feedlot operators in the Southwest.

2. Expanded sorghum production in the Central and Southern Plains States of Texas, Oklahoma, Nebraska and Kansas has reduced the need for Corn Belt corn. In addition, sorghum competes with corn moving out of the Midwest to overseas destinations. So, in effect, the Midwest lost some of its domestic and export market to grain sorghum.

Sorghum Contributes to Geographical Shift in Fed Cattle

Up until recent years, grain feeding of cattle was concentrated in the Midwest where there is always more feed--particularly corn and soybean meal--produced than utilized. But today, out of the 10 leading cattle feeding States, 4 are outside the Midwest. These in order of national ranking are: Texas (3), California (4), Colorado (6) and Arizona (9). Although classified as Midwestern, Nebraska (2) and Kansas (5) also are principal sorghum producing States.

In 8 principal sorghum producing States--Texas, Kansas, Nebraska, California, Oklahoma, Colorado, New Mexico and Arizona--grain-consuming animal units rose from 18 million in 1960 (year beginning October) to 25 million in 1968. 1/ Most of the increase was in cattle on feed, which rose from 5 million units to 11 million in the 8-year span. Other units (mainly poultry) advanced from 13 million to 14 million.

Domestic Usage Expands

On the average, domestic usage is 98% feed consumption. During the early 1960's, feeding was running around 400 million bushels annually. But expansion in cattle feedlots in the Southwest pushed sorghum feeding to 622 million bushels in the 1968/69 marketing year. Thus, sorghum feeding between 1960 and 1968 rose at a yearly average increase of 25 million bushels. For the present 1969/70 marketing season, sorghum feeding probably will be in the area of 670 million bushels, or the highest ever.

Grain-consuming animal units in
8 Western States 1/

Year beg. Oct.	Cattle on feed	Other classes	Total
		Mil.	
1960	5.4	12.6	18.0
61	6.0	13.7	19.7
62	7.3	13.7	21.0
63	7.5	13.4	20.9
64	7.6	13.0	20.6
65	8.4	13.2	21.6
66	9.3	13.9	23.2
67	9.7	14.0	23.7
68	11.2	14.0	25.2
69 2/	12.6	14.0	26.6

1/ Tex., Calif., Colo., Neb., Kan., Okla., N. M. and Ariz.
2/ Based on April 1970 indications.

Other uses--food, industry and seed--usually account for about 13 million bushels annually. Of this, about 2 million goes into seed, 3 million into the production of distilled spirits and alcohol and the remainder for food and industry.

Exports Fluctuate Widely

Unlike the consistent expansion in feed usage, exports had their ups and downs during the 1960's. For example, exports (commercial plus government) rose from 71 million bushels in the 1960/61 marketing season to 280 million in 1965/66 (table 22). But since 1965/66, overseas shipments dropped sharply to 106 million in 1968/69 and presently are estimated at 80 million for 1969/70.

1/ A GCAU is the equivalent of one milk cow in terms of feed consumed. More details by individual years and by kinds of livestock are carried in National and State Livestock-Feed Relationships, Stat. Bul. 446, ERS, USDA, February 1970.

U.S. commercial exports of grain sorghum

Year beg. July	Western Europe				Japan	Other	Total all countries
	Netherlands	Belgium-Luxembourg	Other	Total			
	Million bushels						
1960	28	16	19	63	2	1	66
61	25	22	13	60	1	1	62
62	27	18	22	67	14	21	102
63	28	13	6	47	35	12	94
64	37	15	14	66	35	8	109
65	36	30	28	94	72	24	190
66	21	20	12	53	95	26	174
67	15	12	9	36	77	11	124
68	5	3	1	9	67	11	87

There has been considerable change in sorghum's overseas markets. In the early 1960's, the bulk of it went to Western Europe. But today, Japan is the primary foreign market for U.S. sorghum, taking about three-fourths of all commercial dollar exports.

U.S. sorghum exports under government P.L. 480 programs

Year beg. July	India	Israel	Other	Total all countries
	Mil. bu.			
1960	2	7	13	22
61	---	---	13	13
62	---	---	18	18
63	1	1	2	4
64	2	4	4	10
65	1/42	7	2	51
66	1/86	11	9	106
67	36	13	3	52
68	4	14	4	22

1/ Not adjusted . . . P.L. 480 export data compiled by USDA are slightly above export data reported by the Bureau of the Census.

In 1965, 1966 and 1967 (year beginning July) substantial quantities of sorghum were shipped to India under the government's P.L. 480 program. India, at that time, experienced serious shortages of food crops because of extended drought.

Grain sorghum and corn prices at Gulf ports 1/

Year beg. Oct.	Grain sorghum	Corn	% of corn
	Dol. per cwt.		
Average 1961-68	2.18	2.41	90
1961	2.04	2.20	93
62	2.11	2.39	88
63	2.20	2.48	89
64	2.18	2.54	86
65	2.17	2.55	85
66	2.36	2.59	91
67	2.20	2.18	101
68	2.18	2.32	94
69 2/	2.30	2.41	95

1/ No. 2 Yellow, spot basis, f.o.b. vessel, for prompt or 30-day shipment.
2/ October-April average.

Stocks Decline

Sharply rising production in excess of need during the late 1950's caused October 1 carryover stocks of sorghum to jump from 75 million bushels in 1955 to

702 million in 1961. However, in most years since 1961, use outstripped production, reducing carryover stocks to 244 million bushels in 1967. In 1968 and 1969, carryover stocks held at close to 290 million bushels.

Practically all the changes in carryover stocks from 1961 to 1969 occurred in government stocks (owned by CCC and under loan). Privately owned carryover stocks ranged from 10 to 39 million bushels during the period.

Prices and Loan Activity

Average prices received by farmers for grain sorghum in the 1960's ranged from $1.49 a cwt. to $1.89 for an average of $1.77. During the early 1960's, sorghum prices averaged below loan levels, but in most years since 1963, prices averaged well above loan rates. Beginning with the 1963 crop, sorghum producers participating in the feed grain program were eligible for support payments in addition to the loan. Thus, annual average payments to participants of 29¢ to 46¢ a cwt. during 1963-69 brought the total price level to over the $2 mark for those years (table 22).

From 1960 to 1962, producers put 196 to 220 million bushels of sorghum in the price support program as average prices dipped below the loan rate. But strong demand for sorghum in the middle and late 1960's pushed prices well above loan, resulting in a sharp decline in price support activity. Annual loan activity for the past 4 crops (1966-69) averaged 52 million bushels. More significant, participants in the 1966-68 loan programs delivered relative small quantities of their sorghum to CCC. A combined quantity of only 9 million bushels was delivered from the original loan for these 3 crops. Thus, most sorghum under loan was being redeemed or resealed by farmers in the late 1960's.

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Table 23.--Feed grains: Domestic disappearance and exports, by quarters, United States, 1963-70

Year beginning October	October-December		January-March		April-June		July-September		Total October-September	
	Domestic disappearance	Exports 1/	Domestic disappearance	Exports 1/	Domestic disappearance	Exports 1/	Domestic disappearance	Exports 1/	Domestic disappearance	Exports 1/
	Million bushels									
	CORN									
Average 1963-67	1,030	164	928	139	844	135	756	138	3,558	576
1963	889	151	946	120	792	110	721	119	3,348	500
1964	994	152	951	119	761	151	599	148	3,305	570
1965	994	197	1,007	171	903	177	801	142	3,705	687
1966	1,141	140	837	126	865	107	805	114	3,648	487
1967	1,143	183	895	158	899	129	852	163	3,789	633
1968 2/	1,165	158	1,121	71	839	134	782	173	3,907	536
1969 2/	1,192	186	1,186	140						
	GRAIN SORGHUM									
Average 1963-67	196	48	178	48	114	40	42	51	530	187
1963	184	33	156	27	106	19	38	28	484	107
1964	161	26	156	27	74	37	34	58	425	148
1965	211	50	181	73	129	62	61	81	582	266
1966	210	75	230	65	132	59	42	49	614	248
1967	212	55	168	48	128	21	37	42	545	166
1968 2/	256	28	186	16	137	20	56	42	635	106
1969 2/	310	29	153	33						
	OATS									
Average 1963-67	153	5	233	2	181	4	281	5	848	16
1963	168	1	281	3/	173	1	314	2	936	4
1964	156	2	233	3/	184	1	276	10	849	13
1965	144	13	226	2	207	13	275	9	852	37
1966	166	7	220	1	170	3	272	5	828	16
1967	129	1	207	2	171	2	272	3	779	8
1968 2/	151	2	232	1	176	2	302	1	861	6
1969 2/	138	1	211	1						
	BARLEY									
Average 1963-67	79	16	86	10	75	17	102	12	342	55
1963	83	19	83	15	75	26	114	11	355	71
1964	79	22	96	6	81	21	89	17	345	66
1965	68	22	93	15	67	23	95	15	323	75
1966	88	10	81	7	75	13	102	13	346	43
1967	75	7	76	9	81	2	105	3	337	21
1968 2/	83	4	88	1	81	5	121	1	373	11
1969 2/	81	1	94	3/						
	TOTAL (Million tons) 4 GRAINS									
Average 1963-67	38.7	6.4	36.8	5.5	31.5	5.4	29.3	5.6	136.3	22.9
1963	34.7	5.7	37.3	4.5	29.7	4.3	29.0	4.3	130.7	18.8
1964	36.7	5.6	37.0	4.2	28.3	5.8	24.3	6.3	126.3	21.9
1965	37.7	7.7	39.1	7.2	33.8	7.5	30.8	6.7	141.4	29.1
1966	42.6	6.4	35.3	5.5	32.4	5.0	30.5	5.0	140.8	21.9
1967	41.8	6.8	34.9	6.0	33.4	4.3	31.8	5.9	141.9	23.0
1968 2/	44.2	5.3	42.4	2.5	32.1	4.4	31.2	6.1	149.9	18.3
1969 2/	46.2	6.1	43.1	4.9						

1/ Includes grain equivalent of products. 2/ Preliminary. 3/ Less than 500,000 bushels.

Table 24.--Feed grain stocks: Quarterly distribution, 1967-70

Year	Farm	Commodity Credit Corporation 1/	Terminal market, mill, elevator and warehouse	Total	Farm	Commodity Credit Corporation 1/	Terminal market, mill, elevator and warehouse	Total
				1,000 bushels				
				CORN				
	January 1				April 1			
1967	2,898,768	108,491	670,128	3,677,387	2,043,897	98,279	572,811	2,714,987
1968	3,391,263	97,846	768,215	4,257,324	2,394,728	97,870	712,076	3,204,674
1969	3,276,322	149,156	807,894	4,233,372	2,223,680	148,992	668,236	3,040,908
1970 2/	3,320,292	144,243	848,894	4,313,429	2,221,699	135,285	632,408	2,989,392
	July 1				October 1 3/			
1967	1,337,292	97,690	307,993	1,742,975	569,155	97,571	156,504	823,230
1968	1,646,440	97,785	432,793	2,177,018	781,762	103,312	277,181	1,162,255
1969	1,486,739	145,982	435,674	2,068,395	728,220	143,319	241,855	1,113,394
				GRAIN SORGHUM				
	January 1				April 1			
1967	234,168	4,632	582,240	821,040	133,178	4,624	388,688	526,490
1968	213,026	4,572	514,769	732,367	142,130	4,586	370,321	517,037
1969	221,739	4,600	518,764	745,103	129,823	4,598	408,768	543,189
1970 2/	188,912	4,581	498,925	692,418	120,261	4,577	381,318	506,156
	July 1				October 1 3/			
1967	81,980	4,606	248,947	335,533	44,414	4,598	194,888	243,900
1968	90,719	4,587	272,821	368,127	58,145	4,586	226,362	289,093
1969	83,816	4,583	297,908	386,307	53,206	4,583	230,457	288,246
				OATS				
	January 1				April 1			
1967	556,765	7,232	97,878	661,875	354,567	6,864	81,031	442,462
1968	548,803	6,668	97,710	653,181	361,671	6,665	76,869	445,205
1969	660,692	6,656	116,571	783,919	442,820	6,650	102,727	552,197
1970 2/	723,295	7,965	153,021	884,281	528,779	7,914	135,476	672,169
	July 1 3/				October 1			
1967	198,940	6,664	64,682	270,286	646,183	6,674	128,996	781,853
1968	206,173	6,668	59,843	272,684	782,012	6,658	147,997	936,667
1969	275,218	6,664	93,285	375,167	829,616	7,884	185,844	1,023,344
				BARLEY				
	January 1				April 1			
1967	179,138	4,786	110,440	294,364	114,921	4,523	87,717	207,161
1968	184,640	3,902	114,637	303,179	129,092	3,946	85,320	218,358
1969	247,666	3,916	119,982	371,564	183,783	3,917	95,117	282,817
1970 2/	257,970	4,915	157,236	420,121	192,825	4,906	129,404	327,135
	July 1 3/				October 1			
1967	56,974	4,240	60,558	121,772	232,580	4,030	144,870	381,480
1968	71,524	3,944	62,200	137,668	303,093	3,931	147,208	454,232
1969 2/	114,875	3,927	80,682	199,484	306,638	4,991	185,803	497,432

1/ CCC owned at binsites; excludes grain owned by CCC in other positions. 2/ Preliminary. 3/ Old crop grain only.

Table 25.--Feed grains: Base acreage on signed and participating farms and acreage diverted, 1964-70

Crop	CORN					GRAIN SORGHUM				
	Base acreage:			Acreage diverted 1/		Base acreage:			Acreage diverted 1/	
	On signed farms	On participating farms				On signed farms	On participating farms			
	Mil. acres	Mil. acres	% of acreage on signed farms	Mil. acres	% of base acreage on participating farms	Mil. acres	Mil. acres	% of acreage on signed farms	Mil. acres	% of base acreage on participating farms
1964	51.0	49.2	96.5	22.2	45.1	16.3	15.5	95.1	6.5	41.9
1965	56.2	54.0	96.1	24.0	44.4	18.2	17.2	94.5	7.0	40.7
1966	53.3	51.1	95.9	23.7	46.4	18.3	17.1	93.4	7.3	42.7
1967	51.8	49.5	95.6	16.2	32.7	18.3	16.9	92.3	4.1	24.3
1968	58.0	55.2	95.2	25.4	46.0	18.6	16.9	90.9	7.0	41.4
1969	61.3	58.8	95.9	27.2	46.3	19.5	17.8	91.3	7.5	42.1
1970	59.9					19.4				
	BARLEY					TOTAL				
1964	10.2	8.8	86.3	3.7	42.0	77.5	73.5	94.8	32.4	44.1
1965	12.1	11.5	95.0	3.7	32.2	86.5	82.7	95.6	34.7	42.0
1966	12.0	10.8	90.0	3.7	34.3	83.6	79.0	94.5	34.7	43.9
1967	2/	2/	2/	2/	2/	70.1	66.4	94.7	20.3	30.6
1968	2/	2/	2/	2/	2/	76.6	72.1	94.1	32.4	44.9
1969	13.2	11.9	90.2	4.4	37.0	94.0	88.5	94.1	39.1	44.2
1970	13.2					92.5				

1/ Does not include acreage in the Soil Bank Program. 2/ No provision for diversion.

Table 26.--Feed grains: Production and quantities placed under price support, United States, 1961-69

Crop of	Feed grain production	Quantity placed under price support 1/						Delivered to CCC 2/	
		Corn	Grain sorghum	Oats	Barley	Total	Percentage of production	Total	Percentage of quantity placed under support
	Mil. tons	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. tons	Percent	Mil. tons	Percent
1961	139.8	658.6	196.3	20.6	44.2	25.3	18	23.7	94
1962	141.7	590.8	219.4	32.0	39.9	24.2	17	19.9	82
1963	153.8	395.3	141.4	38.9	28.2	16.3	11	4.6	28
1964	134.2	215.8	82.9	44.9	15.0	9.4	7	3/3.7	39
1965	157.4	214.9	106.0	43.9	16.5	10.1	6	3/3.7	37
1966	157.6	263.0	27.7	22.7	16.5	8.8	6	---	---
1967	176.0	497.0	65.3	37.2	48.2	17.5	10	---	---
1968	168.9	404.0	74.0	94.9	123.8	17.9	11	---	---
1969	174.2	4/389.7	4/39.7	4/148.9	4/50.4	4/15.6	9	---	---

1/ Placed under loan and purchase agreement through 1963; under loan plus quantities delivered to CCC under purchase program. 2/ Includes deliveries from original program, the reseal program and over-deliveries as determined by the final weight of grain. 3/ Assumes that most of the 1964 and 1965 corn under reseal on April 1, 1970, will be delivered to CCC. 4/ Through April 30. The loan period for oats and barley expired April 30; corn producers have through June 30 and sorghum grain producers through May 30 or June 30 to place these grains under loan.

Table 27.--Grain-consuming animal units and livestock production units, supply and fed per unit, 1926-68

REVISED SERIES

Year beginning October 1	All concentrates 1/ Total supply	All concentrates 1/ Quantity fed	Grain-consuming animal units 2/	All concentrates Supply per unit	All concentrates Fed per unit	Livestock production units 2/	All concentrates fed per production unit
	Mil. tons		Mil.	- - Tons - -		Mil.	Tons
1926	111.8	92.0	88.0	1.27	1.05	64.9	1.42
1927	111.9	96.5	88.9	1.26	1.09	66.5	1.45
1928	114.9	95.8	88.4	1.30	1.08	66.6	1.44
1929	110.8	94.3	94.8	1.17	.99	72.7	1.30
1930	104.1	86.5	94.4	1.10	.92	73.0	1.18
1931	113.0	94.0	97.0	1.16	.97	74.9	1.26
1932	127.8	101.3	99.7	1.28	1.02	75.6	1.34
1933	107.3	83.7	97.0	1.11	.86	70.8	1.18
1934	74.2	62.9	83.8	.89	.75	61.7	1.02
1935	105.9	85.7	88.4	1.20	.97	66.1	1.30
1936	83.0	68.5	87.7	.95	.78	66.9	1.02
1937	114.7	88.8	87.7	1.31	1.01	72.1	1.23
1938	123.4	92.0	94.4	1.31	.97	75.0	1.23
1939	129.4	95.5	99.1	1.31	.96	79.1	1.21
1940	133.5	101.0	99.0	1.35	1.02	80.5	1.25
1941	144.2	112.1	107.1	1.35	1.05	88.7	1.26
1942	165.0	134.6	120.4	1.37	1.12	100.0	1.35
1943	156.5	130.6	120.6	1.30	1.08	97.7	1.34
1944	150.1	120.9	109.5	1.37	1.10	90.6	1.33
1945	146.2	124.3	106.0	1.38	1.17	88.5	1.40
1946	149.2	114.3	101.5	1.47	1.13	86.7	1.32
1947	125.9	103.7	97.2	1.30	1.07	84.5	1.23
1948	158.7	111.7	100.1	1.59	1.12	87.1	1.28
1949	167.3	118.3	102.8	1.63	1.15	90.7	1.30
1950	170.1	121.7	104.7	1.62	1.16	93.9	1.30
1951	160.9	124.1	104.5	1.54	1.19	93.9	1.32
1952	159.0	114.0	100.8	1.58	1.13	92.2	1.24
1953	163.0	116.5	99.5	1.64	1.17	91.7	1.27
1954	171.8	116.2	102.5	1.68	1.13	96.2	1.21
1955	187.1	122.3	104.0	1.80	1.18	98.3	1.24
1956	189.7	119.8	101.6	1.87	1.18	96.5	1.24
1957	209.6	129.0	100.0	2.10	1.29	97.6	1.32
1958	232.5	139.5	104.6	2.22	1.33	103.5	1.35
1959	246.8	144.7	103.6	2.38	1.40	103.1	1.40
1960	260.4	149.8	104.7	2.49	1.43	105.3	1.42
1961	256.2	151.8	106.0	2.42	1.43	107.4	1.41
1962	245.2	150.3	109.0	2.25	1.38	110.7	1.36
1963	250.4	148.3	108.3	2.31	1.37	112.9	1.31
1964	237.6	145.3	105.9	2.24	1.37	111.1	1.31
1965	247.2	161.0	106.3	2.33	1.51	114.4	1.41
1966	235.1	160.7	111.5	2.11	1.44	119.9	1.34
1967	249.1	161.8	111.5	2.23	1.45	122.3	1.33
1968	256.4	172.2	113.7	2.26	1.51	122.7	1.40

1/ Feed grains, wheat, rye and byproduct feeds. Compiled from Feed Statistics, Statistical Bulletin No. 410, September 1967, ERS, USDA.

2/ Compiled from National and State Livestock-Feed Relationships, Statistical Bulletin No. 446, February 1970, Farm Production Economics Division, ERS.

Table 28.--Prices of selected processed feeds at principal markets, 1967-70 1/

[Dollars per ton]

Year beginning October	MEALS								
	Soybean, 44%, Decatur			Cottonseed, 41%, Memphis			Meat meal, 50%, Chicago		
	1967	1968	1969	1967	1968	1969	1967	1968	1969
October	71.80	78.20	75.40	76.10	66.20	63.40	87.00	97.00	93.10
November	71.90	73.50	69.90	76.60	65.60	67.75	82.80	94.40	97.20
December	73.40	71.60	82.90	78.10	67.80	78.00	81.60	91.00	99.00
January	75.10	69.80	87.50	77.90	68.40	88.10	88.70	92.80	121.90
February	74.50	69.90	85.25	77.60	64.60	74.50	84.40	88.80	134.40
March	75.00	72.60	71.80	76.20	62.50	64.40	85.30	80.90	107.10
April	74.60	73.30	74.60	77.00	61.70	64.90	86.70	84.80	115.60
May	75.00	76.10		77.60	59.10		90.60	87.50	
June	79.50	77.50		78.20	59.60		95.60	92.40	
July	82.80	77.30		78.20	68.00		96.50	101.00	
August	84.40	76.90		78.00	71.00		92.80	95.30	
September	85.10	72.70		79.10	67.80		94.10	93.00	
Average	76.90	74.10		77.60	65.20		88.80	91.60	

Year beginning October	Fish meal, 60%, New York			Gluten feed, 21%, Chicago			Wheat middlings, Minneapolis		
	1967	1968	1969	1967	1968	1969	1967	1968	1969
October	124.30	129.20	193.40	46.80	42.80	47.00	44.20	38.10	42.10
November	121.40	129.60	202.40	49.20	46.00	49.50	45.60	44.40	43.25
December	121.00	135.20	203.80	51.00	49.20	51.60	45.90	49.10	46.30
January	120.20	140.20	197.50	53.20	50.00	56.75	44.30	47.80	53.60
February	119.00	141.00	185.50	48.50	48.50	56.00	40.90	42.50	41.25
March	115.70	140.50	196.00	45.70	43.50	44.40	41.40	38.70	36.80
April	115.00	145.00	202.50	43.20	42.00	42.00	38.10	41.90	40.75
May	131.40	161.00		42.50	40.00		39.70	32.40	
June	139.20	168.00		41.70	40.00		37.90	35.30	
July	142.80	173.90		38.60	40.00		33.40	34.30	
August	141.00	172.10		38.00	40.00		32.60	34.10	
September	132.80	171.80		40.00	42.40		34.20	40.40	
Average	127.00	150.60		44.90	43.70		39.80	39.90	

1/ Bulk, except fish meal which are bagged basis.

Table 29.--Production, stocks, and foreign trade in processed feeds, foreign trade in feed grains, and corn and barley processing, specified months 1/

Commodity	Production					Stocks 2/				
	1969	1969/70				1969	1970			
	Mar.	Dec.	Jan.	Feb.	Mar.	Apr. 1	Jan. 1	Feb. 1	Mar. 1	Apr. 1
	1,000 tons					1,000 tons				
Processed feeds										
Soybean meal	1,292.4	1,498.2	1,475.0	1,388.9	1,491.8	184.8	131.6	135.8	154.3	150.4
Cottonseed meal	201.0	240.0	232.5	213.4	196.7	163.5	74.9	83.6	108.6	146.5
Linseed meal	21.0	17.4	19.9	20.6	18.2	17.7	2.4	2.8	2.0	4.2
Peanut meal	14.1	11.0	13.0	13.2	15.7	8.3	2.9	1.9	3.2	4.7
Meat meal and tankage	166.1	169.2	170.9	154.8	156.7	---	---	---	---	---
Fish meal and solubles	5.7	11.6	5.1	5.6	6.4	---	---	---	---	---
Brewers' dried grains	30.3	27.6	25.8	25.6	30.2	4.0	5.8	3.8	4.1	5.5
Distillers' dried grains	40.4	38.2	38.2	39.0	36.3	2.6	2.4	3.3	3.2	4.1
Wheat millfeeds	363.6	401.7	383.5	356.5	362.2	---	---	---	---	---
Rice millfeeds	37.4	43.8	38.6	33.5	35.4	---	---	---	---	---
Alfalfa meal, dehydrated	22.7	15.1	9.4	11.9	20.0	216.9	555.3	419.1	300.9	191.9
sun-cured	25.9	27.5	31.1	26.5	27.0	6.2	11.0	10.2	11.6	11.8
Total	48.6	42.6	40.5	38.4	47.0	223.1	566.3	429.3	312.5	203.7
Inedible tallow	43.4	44.0	45.4	42.5	44.4	---	---	---	---	---

Commodity	Foreign trade									
	Exports					Imports				
	1969	1969/70				1969	1969/70			
	Mar.	Dec.	Jan.	Feb.	Mar.	Mar.	Dec.	Jan.	Feb.	Mar.
	1,000 tons					1,000 tons				
Soybean meal	449.0	411.2	374.7	287.0	310.5	---	---	---	---	---
Cottonseed meal	.1	.7	.9	.4	1.2	2.5	0	3/	0	0
Linseed meal	1.6	4.6	1.2	1.2	0	.1	.2	.3	.2	.1
Other oilseed meals	5.0	2.2	2.2	3.8	4.9	1.8	0	.2	3.2	3/
Fish meal	---	---	---	----	---	45.2	11.0	20.3	21.4	19.5
Molasses	15.2	.7	4.5	7.4	2.6	173.0	279.1	223.8	154.1	263.2
Corn byproducts	75.5	45.5	24.2	36.3	45.5	---	---	---	---	---
Wheat millfeeds	4.8	.1	.1	3/	0	5.7	12.1	15.7	17.9	10.4
Alfalfa meal, dehydrated	11.3	13.8	15.5	23.1	21.0	---	---	---	---	---
sun-cured	9.8	16.2	12.7	8.3	22.4	---	---	---	---	---
Total	21.1	30.0	28.2	31.4	43.4	---	---	---	---	---
Mixed poultry feed	12.2	12.3	10.3	10.6	10.4	---	---	---	---	---
Mixed dairy feed	12.2	2.1	13.7	19.1	14.2	---	---	---	---	---
	1,000 bushels					1,000 bushels				
Feed grains (including products)										
Corn	51,451	49,447	41,171	51,562	46,118	51	85	63	226	61
Grain sorghum	7,817	9,681	14,380	11,453	7,078	10	0	3	0	6
Oats	544	304	247	735	388	228	198	254	170	182
Barley	669	230	130	190	122	100	2,637	591	238	393
Total (1,000 s. tons)	1,684	1,666	1,562	1,781	1,499	8	69	20	15	14

Commodity	Grain processing or use						
	1969		1969/70				
	February	March	November	December	January	February	March
	1,000 bushels						
Corn							
Distilled spirits and alcohol	3,136	3,264	2,756	2,701	3,073	3,023	*
Grain sorghum							
Distilled spirits and alcohol	252	235	254	239	214	210	*
Barley							
Malt liquors	7,362	9,081	7,043	7,887	7,796	7,648	9,654
Distilled liquors and alcohol	631	671	606	588	655	599	*

1/ Data compiled from reports of the Bureau of the Census, Consumer and Marketing Service, Fish and Wildlife Service of the Department of the Interior. 2/ At processors' plants. 3/ Less than 50 tons. *Not yet available.

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